

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2108.—VOL. XLVI.

LONDON, SATURDAY JANUARY, 15, 1876.

WITH PRICE SIXPENCE.
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East Van	13½ ... 13¾	Tecoma	1 ... 1¼
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Javali	10s. ... 12s.	Van Consols	2½ ... 2¾
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60 Cathedral. 45 Last Chance. 60 Santa Barbara.
45 Cedar Creek. 20 Marke Valley. 20 Tankerville.
50 Chapel House. 15 New Quebrada. 5 Tincroft.
20 Chicago (Silver). 80 Parys Mountain. 85 Tecoma.
20 Colorado Terrible. 60 Pateley Bridge. 100 Trebeigh Consols.
55 Don Pedro. 40 Pennerley. 45 Van Consols.
25 East Van. 90 Prince of Wales. 10 Van.
20 Eberhardt. 75 Penstruthal. 10 West Chiverton.
35 Emma. 30 Plympton. 50 Western Andes.
60 Exchequer. 80 Port Phillip. 40 West Tankerville.
50 Frontino. 45 Richmond. 25 Wheal Crebor.
40 Flagstaff. 70 Rica. 25 Wheal Grenville.

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PROF. SMYTH'S LECTURES ON MINING—No. X.

[BY OUR SPECIAL REPORTER.]

We must now pass from the general consideration of these repositories of ore to deal with operations of a preliminary character, which usually precede the opening out of a mine. Such operations have to be undertaken by the miner in the various districts in which he may have to search, either original, where no mines already exist, or in a district where he can base his search on the foundation of some mines known in the neighbourhood; or, lastly, in order to extend certain works either in depth or length. Costeaning is a term frequently used by the miners for particular methods of searching, and a name which has come into use in the colonies is "prospecting." On these operations it is frequently the case that a great deal of money is spent, and sometimes in vain, and very great ignorance is in some instances displayed in the nature of the operations carried out, and in the search, as regards the particular class of rocks in which the openings should be made. One of the first difficulties we have to encounter is that resulting from the fact that the surface of the rock is covered by deposits of sand and gravel, vegetable matter and vegetation, and in some places, as on the granitic tract of Dartmoor, peat bogs. But for this our operations would be comparatively easy, as it is we have to form conclusions from our observation of a small portion of the ground, which shall be applicable to very large areas. It results from these conditions that a large proportion of those mines which could be pointed out as notable ones have been discovered by a series of accidents. To take a few instances of this, one lode in the neighbourhood of Tavistock was discovered by some boys out fishing, who found the gossan of a copper lode with a small quantity of ore in it; and the Plympton Mine, on the flanks of the mountain of that name, was similarly discovered by some men while fishing. In other cases it is stated that the observation of the pellets picked up by game birds has led to the discovery of lodes, as of gold in Lower Hungary; or, again, where the ducks and geese in Australia picked up grains of gold from the beds of the streams. The famous silver mines of Potosi are said to have been discovered by an Indian, who taking hold of a bush to prevent his falling pulled it up by the roots, and thereby disclosed some masses of native silver. The copper mines of Wallaroo, in South Australia, recently brought into notice, were discovered by observing some green copper in the material thrown out by a little burrowing animal—the wombat. And one more case may be mentioned which has produced such momentous results—the discovery of gold by Col. Sutter, a Swiss emigrant, in California, while cutting a small watercourse. This discovery led not only to a "rush" being made to that particular district, but also to search being made in South America, Australia, and other countries for similar deposits.

The minerals to be met with in stratified deposits are subject to the laws laid down by geologists, and we may depend upon it that the very best guide to the search for these stratified minerals is a thorough knowledge of geology, such as can be attained partly by reading, partly by study in the field. This being so, I propose to speak here of a few special points only. Some grievous mistakes are made by persons who have not acquired the necessary amount of geological information. Thus you hear such remarks as this, that a certain district is likely to produce coal, because the soil consists of clay; or because there is limestone somewhere near, and sandstone also near; or because the wells and springs deposit a quantity of ferruginous matter. All these appearances it is true accompany the occurrence of coal in coal districts, but not always; neither are they confined to coal districts, and that is the important point. Another guide that is sometimes held to be valuable is the occurrence of salt springs, which are supposed to lead to the discovery of beds of rock salt: in the new red sandstone, formerly called the saliferous strata, they are connected with such beds; but often in the coal measures, in sinking through sandstone, the water is found to be notably salt. In some cases, again, we meet with an evolution of carburetted hydrogen, or fire-damp, from the surface of the ground, and we may then, with a good show of reason, conclude that such emanations of gas are connected with the occurrence of coal beneath. These occur in large quantities sometimes, so that they may be applied for artificial light or heat, as in the case of the fire-wells of China; and, again, in Hungary, where the main galleries in one mine are lighted by carburetted hydrogen so derived. But there are cases, again, where the evolution of this gas does not proceed directly from coal, as from some of those later formations in which the Americans have sunk their bore-holes and wells for the purpose of extracting the petroleum. In dealing with these stratified deposits, therefore, it is necessary to keep in mind what is really the origin of these phenomena, which may take place, for example, in the coal measures, but are not exclusively confined to them.

In searching for minerals which are not stratified we may have three different objects to pursue: (1) to determine the course, or the back or outcrop, of a lode already known; (2) to discover the branches, or parallels, or neighbouring lodes in a district already known; (3) to explore new ground. In the present lecture we shall consider the first two divisions of these. In these we have a series of elements given, and have to find the rest. When a lode has been worked, and is enclosed on both sides by the same rock, we shall require to trace out its average direction, and then, as we have seen, we may reasonably expect the lode to continue in that direction. It is necessary to take the average direction of the lode, for some hundreds of fathoms say, in order to avoid errors arising in one particular part from inequalities of the ground; for it will readily be seen that in passing through a valley a lode will be carried down the valley in the direction of the dip. This appears very simple, but in practice it may be much complicated from the thickness of cover lying on the lode, or from dislocation, due to cross-courses. The miners have a notion about these heaved veins, of the truth of which I am very doubtful myself: they believe that if a lode is heaved by a cross-course it is sure to come back again into its original line, and that, therefore, if you drive straight on in the direction of the lode you will meet with the other part of it. At all events, a great deal of time would thus be spent, and in many instances I am sure the lode would never be met with again. It

Fig. 11.

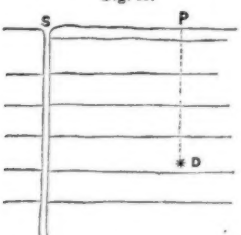
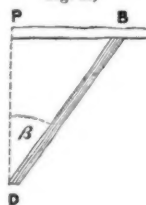


Fig. 12.



may be that after working only a tolerable lode we come at a point, D (Fig. 11), at some distance from the shaft, S, on a rich deposit, and we require to find the back of the lode, where from cover, &c., at the surface there is no trace of it. This we can limit more or less by knowing the general strike of the lode, but we can approximate more nearly to it by a simple trigonometrical problem. Let Fig. 12 represent a transverse section through D (Fig. 11), and DB the lode; then knowing the depth of PD and the angle B, we can readily determine the distance, PB: there will, of course, be a slight error, due to the thickness of the cover. The discovery of the lode will be much easier if it is a contact deposit, and if we can determine the junction of the two rocks which form the wall, but lodes very rarely have this character. Where the back of the lode is of a hard material, which resists the degrading influence of the atmosphere better than the country round, this back will be marked very dis-

tinctly by a ridge; but where the lode is no harder, or even softer, than the country this will not aid us.

Where we have the back of the lode hidden by superficial deposits we proceed to find it by the method of trenching, or costeaning. If the superficial deposit does not exceed 5 or 6 ft. in depth a line is taken at right angles to the general run of the lode, and a trench is dug along this line to lay bare the solid rock, in order that the latter may be carefully searched for any appearance of the lode. We have seen that the lodes in a majority of instances make for the surface of the rock, but that they may occur there in a much changed condition, and, therefore, we must not be disappointed if we find what has been a good lode below is represented at the surface by only a few strings of gossan. Great care is necessary in order to observe and test any indications of the lode. If the depth of the surface accumulation be greater than in the last instance—from 10 to 20 ft.—then the process of costeaning is employed. In principle it is the same as the last, only that instead of going to the expense of digging a trench along the line at right angles to the lode, a shaft is sunk on each side, and then a cross gallery (just large enough for the men to creep through and work conveniently in) is driven between the shafts. The sides of this cross-cut are carefully examined for any indication of the lode.

In examining the ground for series of parallels, or branches, or side lodes we require much the same sort of arrangement as in the last division. During the actual working of the lode cross-cuts should be driven here and there into either wall, in order to determine if there be any branches, or parallel lodes, or a portion of the lode split off by a horse. This is a point too often neglected, especially if the lode breaks away from the wall easily; and numerous instances might be pointed out where mines have been working for some time, and extended some distance, without finding considerable sources of wealth lying close to, and discoverable by means of short cross-cuts. Supposing that it is likely that there should be at a somewhat greater distance parallel lodes, then it is necessary to search over the surface of the ground, or to drive longer cross-cuts underneath. And in some districts not only is there a parallelism between the lodes to be observed, but also the disposition of ore against ore; hence the great tendency to examine lodes parallel to those which have proved good ones. These phenomena are well shown in the district of St. Agnes and Redruth, and also in the chart of the Alston Moor district by Mr. Wallace. The miners think that if one lode has done well between any particular pair of cross-courses, another lode intersected by the same pair will also do well in that position, and I think there is a great deal of truth in this. In tracing the lodes over the surface you meet with interruptions: you may come on a newer formation, developed from beneath or from above. For instance, you may have a mass of igneous rock coming in, and stopping your vein entirely; or, on the other hand, you may merely have the original country overlaid by a newer formation. Here we come again to the necessity for thorough geological knowledge, in order to determine what is the relation between the two sets of rocks.

This branch of our subject takes us into that of the re-opening of old mines; the examination of these to that end is attended with many difficulties, and hence great disappointment is often felt when the re-opened mine does not bear out the conclusion formed by the surveyor. When possible we should obtain definite official documents on the subject of the particular mine under consideration, but it is too often the case that when a mine has been abandoned, even only for a short time, it is extremely difficult to get any of these. If we have to trust to the statements of the old miners, or worse still, to the traditions which have been handed down from father to son, we are apt to get some very curious tales indeed, and when the documents are not to be obtained these statements must be received with extreme caution. This arises in great part from the cause that the men are apt to remember the rich parts of the mine, and to forget everything about the poorer portions. One remarkable instance of re-opening was in connection with the Wheal Vor Mine, to resume the working of which vigorous attempts were made in 1855. It was known by documents to be very rich, had been worked down to a depth of 300 fathoms, and had been abandoned only about 20 years. After 25,000 ft. had been spent in clearing the mine of water, &c., it was found that it would not be worth working a month, and this result was due to two causes—partly to the fact that the miners remembered only the richer portions of the mine in their statements, and partly from the bad shape in which the mine had previously been worked. In limestone districts hollows (somewhat funnel-shaped), due to the action of water, have much the appearance of old shafts; these occur in the North of England, Carinthia, North of Spain, &c. When we come on a real old shaft the quality of the mine can be seen frequently, where we cannot get down on account of water, in the arches left here and there for support, but we must bear in mind that the miners would not be likely to leave the best pieces of the vein as arches. A great deal of information as to the nature of the old workings can often be obtained by the examination of the water which runs from the adit level, of the stuff round the shaft, of the rubbish heaps, of the slags where the metals were worked, and of the matter from the washing-floors. We must patiently and accurately gather together all this sort of information, which must be carefully and fairly weighed before we can conclude whether an old and abandoned mine is worth resumption.

IMPROVED GAS FURNACE (BICHEROUX'S).

For some time past two improved gas furnaces, the invention of Mr. Bicheroux, has been in operation at Earl Dudley's Round Oak Ironworks, and gave great satisfaction. It appears that by means of a series of very careful trials made by Mr. Casson, the manager, and extending over several weeks, he ascertained the exact consumption of coal and waste of iron in the two furnaces, and found that during the week ending Nov. 13 the results for a 16-in. mill were—Charge, 110 tons 4 cwt. 22 lbs.; finished iron, 93 tons 2 cwt.; ends cut off, 9 tons 17 cwt. 36 lbs.; waste in the furnace, 7 tons 4 cwt. 98 lbs., or 6.57 per cent. For the same mill during the following week the results were—Charge, 108 tons 6 cwt. 10 lbs.; finished iron, 92 tons 5 cwt. 84 lbs.; ends cut off, 9 tons 10 lbs.; waste in the furnace, 6 tons 19 cwt. 40 lbs., or 6.43 per cent. Thus the average loss was 6½ per cent. of the charge, although the mill worked but single turns, six days a week, and the rolls were changed 24 times in the first, and 25 times in the second week. In the week ending Dec. 18 the mill worked on double turns, 10 turns in all, and 185 tons 13 cwt. 14 lbs. of iron was made, with a consumption of 66 tons 13 cwt. of coal; 1 ton of iron, therefore, requiring less than 7½ cwt. of Staffordshire coal. Indeed, so complete has been the success, that it is understood to be the intention to convert the whole of the furnaces to the Bicheroux system.

With regard to the construction of the furnace, it will suffice to explain that the heating furnace is of the ordinary kind, but where the grate is usually placed passages are built for the gas and air. The furnace is connected by means of a canal with the producer, the latter being of a very simple construction; it consists of two vertical side walls, and inclined front and back walls. The front slope is supported by a strong framing, the back slope by brickwork. The whole is vaulted over with fire-bricks. At the bottom of this so-formed chamber are the fire-bars, about 2 ft. 6 in. long; they can easily be taken out to enable the stoker to draw the clinkers from the producer. There are besides two folding doors for the ashpit, by means of which the air can be completely shut off, so as to stop the generation of gas. At the top in front are three or four stoke-holes, through which the producer is fed; these stoke-holes are either closed by bricks or simply by small coal. Before the stoke-holes is a platform for the stoker and a supply of coal. The producer may be placed entirely above ground, and then requires a side framing, or it may be placed underground, when the side framing may be replaced by brick walls. If the ground permit it, the producer should be placed underground, as it then does not stand in the way of the workmen.

The distance of the producer from the furnace depends on the circumstances in each case, but it is desirable that they should be placed sufficiently close to prevent the gases becoming cooled in their pas-

sage from one to the other. The gas flue is built of fire-bricks, and may advantageously be placed underground, when the framing may be dispensed with. This flue is sometimes provided with a slide-valve of brick or iron to shut off the gas when required. The gas passage is the continuation of the flue coming from the producer, the gas entering the furnace over the bridge. Before it passes the bridge, however, it is met by a number of air currents at one or both sides. The air passes from the flue at the sides of the gas passage into the latter through a number of small holes formed by fire-bricks, placed a little apart from each other. The air thus admitted is previously heated, which may be done in various ways, either in the producer and gas flue, or at the bottom, or sides, or crown of the heating furnace.

The hearth bottom is kept cool, and protected from rapid destruction, by the air being caused to enter at the end opposite to the gas entrance, so that it travels slowly under the hearth to a box of cast-iron, whence it enters the air passages at the sides of the gas passage. By means of a slide in the box the furnaceman can control the admission of air, and thereby the heat in the furnace to a nicety. The ignited gas expands over the bridge into the furnace, where it heats the iron. Thence it goes under the boiler into the chimney. It has been estimated that at the Round Oak Works when working single shifts the saving of fuel is equal to 40 per cent., and that in the gas producer coal much inferior in quality to that which would be necessary in the ordinary firing furnace can be employed. The Bicheroux furnace has been for some time in extensive use on the Continent, especially in Westphalia (for instance at the Rhenish Steel Works Company in Ruhrort, at Jacobi and Haniel's works in Oberhausen, at the Harkort's works in Duisburg), in Belgium (at Ougrée, Séraing, Angleur), in France (Monceau, Ars-sur-Moselle), and in Austria at the railway works at Gratz, the results obtained in every case being such as to fully entitle the system to a fair trial in the ironworks of this country.

THE TRADE IN EXPLOSIVES.

Many of our readers may not be aware that an Act passed during last session, which is now in operation, will henceforth regulate the trade in explosives, while it provides safeguards against many of the dangers to which the public have been hitherto exposed. Prior to Jan. 1 the laws relating to explosives were contained in five Acts—The Gunpowder Act, 1860, 23 and 24 Vic., c. 139; The Gunpowder Amendment Act, 1861, 24 and 25 Vic., c. 130; The Gunpowder Amendment Act, 1862, 25 and 26 Vic., c. 98; The Carriage of Dangerous Goods Act, 1866, 29 and 30 Vic., c. 69; and The Nitro-Glycerine Act, 1869, 32 and 33 Vic., c. 113—besides several local and special Acts relating to the storage of explosives in Liverpool and on the Mersey. The general Acts above referred to have, however, been found quite inadequate to afford the protection to the public which was intended by the Legislature, or to meet the growing requirements of the trade. Some of their provisions were so unnecessarily stringent and so vexatiously oppressive that they were treated as a dead letter; while others of them were so lax as to admit of serious offences being committed without power to punish them, and dangerous practices to be continued without power to stop them. By the late Gunpowder Acts the licensing authorities were not empowered to limit the duration of licenses, or to suspend a license once granted for a factory, though local changes might have rendered this necessary in the interest of public safety. Besides, there was nothing in the Acts to forbid the indefinite extension of a magazine duly licensed. The erection of lightning conductors, except on store magazines of gunpowder factories, was optional. The regulations as to the carriage of powder by land and water were inadequate. The Acts, while carefully protecting parish churches, by prescribing the distances at which magazines and factories might be placed in relation to them did not regulate the distances from dissenting chapels, dwelling-houses, railways, or public thoroughfares.

In striking contrast to the laxity of the law in regard to gunpowder was its unnecessary stringency in regard to some other explosives. To sell an ounce of dynamite to a man whom the seller did not actually know to possess a license was a crime, and even a Secretary of State, without a license, found smuggling a few cartridges to blow up tree roots might be sent to gaol for a twelvemonth with hard labour. Railway companies, bargemen on canals, roadside carriers, and owners of donkey-carts carrying small parcels of dynamite without a license rendered themselves liable to a fine of 500l. The Act of 1875 is intended to place the manufacture, sale, and carriage of explosives on more equal terms. It consists of 122 sections, and is divided into four parts. The first relates to gunpowder, the second to other explosives, the third to the administration of the law, and the fourth contains supplemental provisions, and deals with legal proceedings, exemptions, and definitions. To shorten the Act, and to admit of subsequent regulations necessitated by changes in the manufacture and the expansion of trade, many details are allowed to be provided for by Orders in Council and by Orders of the Home Secretary. Already eleven Orders in Council and four by the Home Secretary have been issued, and these together are nearly as bulky as the Act itself. The Orders in Council deal with the classification of explosives, rules for factories, magazines and stores, registration of retailers' premises, and the sale of explosives; while the Orders of the Secretary of State relate to rules for floating magazines, packing, and conveyance on road. Special transport regulations sanctioned by the Board of Trade have to be provided by harbour authorities and railway and canal companies. About a dozen forms have already been issued from Her Majesty's Stationary Office for the use of those who have to apply for new licenses or continuing certificates, and for the convenience of our readers we give elsewhere a list of them.

The great objects of the present Act are to provide additional security to life and property, to consolidate existing laws, to do away with the inequalities of previous Acts, and to place manufacturers, sellers, and users of all licensed explosives as far as possible on an equal footing. Much unnecessary alarm has recently been created in the public mind in regard to dynamite in consequence of the Bremerhaven outrage, and the mistakes that writers often make in confounding this useful blasting agent with nitroglycerine. If the severe tests to which dynamite was subjected by the experiments of the Guncotton Committee, and the opinions of such men as Prof. Able and Major Majendie, are of any value, the article is as safe, if not safer, to use, sell, or transport than ordinary gunpowder; and, as might have been anticipated, greatly increased facilities are given by the new Act for the trade in this industrial explosive. Hitherto a retail trade in it has been virtually impossible; but now shopkeepers, by registering their premises with the local authorities, can keep a limited stock of the article either in or adjoining their places of business, and can store it in the public magazines belonging to most towns along with gunpowder. Dealers wishing stores of their own capable of containing 150 lb. to 2000 lb. do not now require to apply to the Home Secretary for licenses, but can obtain them from the local authorities, if the sites selected are found to comply with the prescribed regulations as to distances from protected places. The bye-laws for the conveyance of explosives to be prepared by railway companies have not yet appeared, but it is to be hoped they will be so framed as to afford the utmost facilities consistent with public safety. These companies have now monopolised the carrying trade of the country; and should any unnecessary or prohibitory restrictions be imposed by them on the open carriage of any of the explosives to which the Act applies, surreptitious conveyance is sure to prevail to an enormous extent. It is a well-ascertained fact that illicit carrying exists to the largest extent on those lines where the charges are highest and the opportunities of conveyance are most unfrequent. If explosives are found indispensable to mining industry the persons who require them will have them, and railway companies which do not carry them openly, safely, and at reasonable rates must make up their minds to having them conveyed stealthily and dangerously, and often for nothing. The action to be taken by the railway companies is one in which the public have a direct interest, and it is to be hoped they will not shut their eyes to the peril of refusing to give the necessary facilities, while they guard themselves as far as possible against the dangers of the traffic by the regulations which they are called upon to prepare.

MINING AND STOCK EXCHANGE NEWS OF THE WEEK.

Messrs. F. W. MANSELL and Co. (Sworn Stock and Share Brokers), Pinner's Hall, Old Broad-street, write to us as follows:—

PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY.—Nine miles of horse levels have been driven in the various lodes, which prove the extent of past underground operations at the day or adit level, and show the impossibility of attempting to estimate, or even to work, the mines in their entirety at once. Of the 26 well-defined lodes comprised within the 1000 acres held by the company, the few yet worked have been generally very productive, from surface down to the adit level (70 fathoms deep). We add the fact that the mines themselves are in the carboniferous limestone, with a limb of the Craven Fault forming the boundary on the west and north, while on the other side of this fault the limestone is thrown below the millstone grit, in order to mention that in this district lead veins traversing the limestone improve in value as they approach these important faults, so that the close proximity of any mine thereto is regarded as an immense advantage. On the Greenhow Rake vein a sump is now down 23 fathoms below the adit, and a course of ore standing in the sump-foot worth more than 3 tons, or 50% per fathom; the ore is nearly in a pure state, the only matrix being a rich red mineral soil and fluor-spar, and is dressed at a very slight cost indeed. West of engine-sump is a winze in Howe's vein, about 17 fms. below the adit; the lode in this winze (called Fielding's) is also worth more than 3 tons, or 50% per fathom. These instances are sufficient to show that the lodes enrich and otherwise improve in depth, and the report of a reputable practical authority, familiar with the earlier history of these mines, says of the 26 veins, the data obtained from old plans and accounts now extant, coupled with the results of modern workings, establish the following facts:—"That the Janet vein was rich to the lowest point reached; that the Rake, Sun, Howe, Cleaver, Galloways, and Water Hole veins have always been used and are still very rich; that the Marden and South veins are very good; and that the Virgin, Old Mixture, Lord Nelson, and Pomgrass veins are moderately good. The latest information shows that the Lumb vein—one of the richest in the property—is expected to be intersected about March next. The Gulf vein maintains its size and regularity—8 ft. wide, producing good quality ore for the whole width, and ground easy. It may be useful to mention that this locally-termed Gulf is a large cross vein running through the district, filled generally with clay, spar, and mixed with lead ore. During the past few days there have been cut in the 20 fm. level cross-cut east several strong strings or feeders, showing branches of solid ore varying in width from 1 to 2 inches, and the surrounding stratum is of an excellent character for producing lead ore; the object of this cross-cut is to reach Fielding's, Sir Thomas's, and other veins, each of which went down from the upper workings worth over 50% per fathom. The smelting works are continually employed. These shares have advanced during the week 1½ per share (or 4000%).

VAN (Lead).—Recent shareholders are probably not aware that before this mine became the property of the present company, in 1869, there had elapsed a period of nearly 12 years of anxious and unsuccessful development. During that long interval, protracted by the inadequacy of private capital to a vigorous working of the property, serious difficulties occurred, threatening its entire abandonment; indeed, the owners more than once suggested that course. Such unabated confidence had Capt. Williams, the present manager, in the ultimate value of the mine, that when its abandonment had been actually determined upon he offered to continue its development with his own private capital, which was accepted under certain conditions; but for this Van, with its teeming wealth, might yet remain unknown and undeveloped. The history of Van is one of intense interest, as we wrote in 1871: "Reviewing every feature in connection with this truly wonderful mine, remembering that in the short space of less than three years it has yielded ore to the value of 130,000%, there is every ground for our opinion that Van is a mighty problem, and that no miner of intelligence who has watched the development of its great lode from adit downwards can fail to see that yet a few scratchings only have been made upon the outer rim or crust, the mere outcrop of the immense body of ore the shaft will disclose at 120 fms. deep." When we penned these remarks the shaft had not reached a depth of 60 fms.; now at 105 fms. deep "the immense body of ore disclosed" is of far greater value than at any previous stage of development. It is not our province to discuss the theories concerning the formation of such an extraordinary ore deposit as this, but its peculiar geology would seem to prove, as in most instances is the case, that all veins are simply infiltrations of charged waters, with solutions of minerals hard by or at a distance from the locality of solution, and carried often for miles to cleavages in rocks called veins or lodes. The sale this month is 500 tons of lead and 210 tons of blende.

EAST VAN (Lead).—It may be useful to point out that the adit in this mine is 22 fathoms from surface, and it is important to remember that in driving west into the hill towards Van a considerable depth of ground is obtained, as may be judged by the fact that the 45 in Van—where the lode was worth 15 tons of ore per fathom—is about the 62 fathom level in East Van. One of the leading characteristics of this great Van lode is that it opens out into "bellies" of ore; in places it is 60 ft. wide; where it is very rich it is not more than 30 ft.—a marvellous lode to be very rich with such a width. East Van shaft was sunk on one of these "bellies"; no disturbing geological change exists between Van and East Van to interfere with the mineral-bearing characteristics of the lode, while East Van (exclusive of the ground recently acquired from the Van Mines) has a run upon the lode of not less than three-quarters of a mile. The lode has been cut into 14 ft., worth fully 50% per fathom (6 cubic feet). The prominent feature is that the lode is productive on its south wall, in contradistinction to its development in the Van Mine, where the productive part has always been on the north wall. Should the whole width of the lode in East Van prove productive, it will be one of the most extraordinary discoveries on record. The shares during the week have further advanced 7½ per share, or to 13½, 13½, equal in the aggregate to 105,000%.

TANKERVILLE (Lead).—Like several of our other great mines, Tankerville has met by its revenue a considerable expenditure for permanent work which capital should have provided, and the advantage has scarcely yet begun to be felt. Sales of ore and profits have fully established the productive character of the mine; while, according to the able manager (Capt. Arthur Waters), the great runs of ore now in sight point to a prosperous future. One of the leading facts in connection with this property is that at Watson's engine-shaft, now down 200 fms. from surface, the prospects are such as to justify the manager in saying that "the mine in depth never looked so bright as it does to-day." In six months all requisite machinery will be provided, and the great runs of lead ore upon the main lode opened for stoping to the greatest possible advantage; the manager thinks that with the levels driven into the old mine the lodes there will contribute to the general output, increasing the divisible profits to the satisfaction of the shareholders.

ARGENTINE—ST. JOHN DEL REY (Gold).—From the numerous communications we have received it would appear not to be generally understood that in addition to the rich lode at the Piqué there is also a parallel lode only a short distance to the east, where the operations were suspended for the same reason as at the Piqué—influx of water; like the Piqué, where the old miners left off, the lode was exceedingly rich. There is also another lode to the west of Piqué which has not yet been worked. The chances of success here are equally as good as on the other lodes. These side lodes can be effectively worked by means of cross-cuts from Piqué, or the water can be pumped by horizontal rods attached to the steam-engine. There is every reason to believe that the two mines north and adjoining Piqué will be as valuable at the deepest points as Piqué itself, so that the Argentine Company possesses not only rich mines, but a long extent of ground on the line of the lodes sufficient to work at a great profit for something like 100 years. Viewing the fact that the lode at Piqué is (say) 15 ft. wide, and will turn out 50 tons of ore per fathom, yielding 3 ozs. of gold per ton, favourable comparison may be made with St. John del Rey, the lode in which gives an

average not exceeding 1 oz. per ton, yet returned a net profit of 110,000% the last year before the fire occurred. The workings in St. John del Rey are over 300 fms. from surface, whereas at Gualin the deepest point at Piqué is only 40 fms.

EBERHARDT AND AURORA (Silver).—Beyond the prominent geological features of Treasure Hill (wherein these mines are situated) there are in addition to the two principal lines of fissures numerous minor breaks that are local in their character and extent; as, for instance, in the wedge-shaped block of country between the Earl and Ward Beecher there are cross breaks and diverging lines of fissures intersecting the country in every direction, thus making it a confused mass of broken country very difficult to trace out to its original lines of connection. The only certain guide by which the connections can be traced, and the distance of down or upthrows measured, is formed in a spar vein that underlies the ore-bearing channel of the Aurora and Ward Beecher Mines. This vein of spar has a banded structure, is from 2 to 10 ft. thick, has a general course north and south, and dips east under the ore channel at angles varying from 32° to 50°, the average dip being about 38° below the horizontal line. This vein of calcspar is a marked feature in Treasure Hill, and many theories have been put forward in relation to it; most persons call it the footwall of the Aurora and Ward Beecher Mines. Although it is apparently the western boundary of the ore-bearing ground of those mines, it shows unmistakable evidence of an origin subsequent to the formation of the ore deposits. These evidences may be seen at the intersections of the east and west fissures, where it is known to have cut the ore bodies belonging to the east and west course; in fact, the entire system of spar veins which penetrate the country rock in every direction through Treasure Hill is later in order of formation than the deposits of ore. The peculiar appearance of the ore deposits strengthens this view. All the important ore bodies brought to light are a mass of angular fragments of quartzose formations cemented in masses more or less compact by ordinary calcspar. The latest information from the mines is that the mill has been shut down, owing from haulage having been suspended on account of snowstorms. The mines continue to open out satisfactorily, and the most profitable season in the company's history is confidently anticipated.

HYDRAULIC GOLD MINING.—In almost all deep gravel deposits a sedimentary deposit is found, which is known under the name of pipe-clay; and, as stated last week, this is generally found in high masses near the rim-rock, or shore of the deep gravel streams, and is evidently the sediment of immense bodies of muddy water. Fortunately that substance, which has really the characteristics of clay, and deserves its name, is very rare in these mines, and only occurs in small layers. Even thus it is troublesome and hard to dispose of, as water will not dissolve it, but turns it into a pasty, tough substance, yielding only reluctantly to the pick. These mud deposits, however, known as pipe-clay or joint-clay, break under the shock of a blast into fine pieces, dissolve in water, and have generally a worse name than they deserve. Their position is always close to the rim-rock, and their bulk disappears towards the deeper and more valuable parts of the gravel deposits. To account for these facts it will be necessary to look into the origin of this so-called pipe-clay. It must be evident that the immense gravel channels of California were filled by periodical floods occurring through the long ages; furthermore, that from time to time, and particularly when the rush of waters temporarily had lessened, or almost subsided, great blockades in the ancient channels took place, keeping the remaining waters back, and thus forming lakes. During such temporary intervals bodies of mud could settle upon the underlying gravel, and rushing from shore to shore in time the deposits called pipe-clay. Any succeeding flood, carrying with it masses of gravel, sand, &c., would necessarily make a new channel in this mud deposit, destroying the middle portions of it, but leaving both shores comparatively intact. This explains the occurrence near the shores of masses of pipe-clay, which, as experience has shown, almost disappear deeper in the channel.

STOCK EXCHANGE GENERAL MARKETS.—Persons who are not in a position to be influenced by the rumours and fluctuations of the moment may frequently look to their operations with greater advantage than those who are so. Changes in the price of speculative stocks are incessant, and the rumours concerning them so contradictory that to be guided by either proves wrong as often as right. A price may be rising rapidly, but suddenly, and without any apparent cause, the movement may be changed, and an equally rapid fall may take place. The operator for a rise who is on the spot hesitates to sell when the price seems likely to go much higher, and waits, although the limit originally fixed may have been passed. But the operator who has left a "limit" has his bargain closed by his broker immediately the prices are touched. The sudden fall in the market does not affect the latter, but may result in a difference of 1 or 2 per cent. to the former. It may be said that the operator on the spot would close when he saw the course of the market turn, but often such changes take place very suddenly. It may happen, of course, that the transaction closed during a rapid rise may be less profitable by (say) 2 or 3 per cent. than had it kept open another hour or so; and it may be urged that the operator who waits for a larger profit than the one originally fixed by him may fare the better by so doing. At the same time the operator at a distance probably has, in such cases, as good a chance as another, and in the long run may be considered to have a better chance.

RAILWAYS.—The feature of the week in this department has been the declaration of the London and Brighton dividend, at the rate of 7½ per cent. per annum, against 6½ per cent. per annum last year. The total return for the year 1875 is 5 per cent. Another important step has, therefore, been taken towards the complete return to the degree of prosperity up to 1867. Six per cent. per annum was paid for seven years up to 1866, and the price of the stock ranged at about 130. During a long period of uncertainty a more satisfactory and solid basis of improvement and stability has been established. If slow and continuous progress has the element of security in it, which experience teaches us, there is every reasonable ground for expecting something like the old durability, while the fatal policy which brought about the collapse of 1867 is not likely to ever again take possession of either directors or proprietors. The weekly traffic returns of English railways again show large increases, indicating the gradual expansion of the trade of the country. On Thursday the South-Eastern dividend was announced, at the rate of 7½ per cent. per annum, as against 6½ this time last year, making the total return for 1875 5½ per cent., as against 5 in 1872, 1873, and 1874. This dividend exceeds by ½ per cent. per annum any hitherto declared by this company. The Sheffield dividend has been announced at 4 per cent. per annum, as against 3 per cent. this time last year.

FOREIGN BONDS.—Speculative descriptions in the early part of the week declined heavily, but as the "account" passed of without serious difficulty, and notwithstanding unusually heavy "contango" rates, a sensible and rapid rebound in values subsequently ensued. Egyptians took the lead, fluctuating as much as 6 per cent. Turkish securities of all descriptions have also been violently agitated upon heavy speculative operations and adverse rumours, none of which appear to be based on fact. Private advices confirm the statement with regard to the powers conferred upon the Imperial Ottoman Bank, which is to have control of all the revenues of the Empire. Peruvian have been steady, and without feature. Hungarian, Portuguese, French, Italian, United States, and Russian, have been firmer. On the whole, there seems to be sufficient ground for expecting that a better tendency should continue. Egyptian bonds towards the latter part of the week improved upon rumours from Paris that Mr. Cave's mission was already having good results, and that no difficulty would be experienced by the Viceroy in obtaining any financial assistance he may require. Turks towards the close have been quoted flatter, upon the agent of the Treasury Bonds having refused to take in the coupons due on Thursday. This feature, however, should not be over-estimated in significance. San Domingo bonds on Thursday advanced 15 per cent., probably indicating that the scheme of arrangement with the bondholders devised last year and fell through has obtained such support as to warrant its proposal to the bondholders. This latter is one practical instance of the correct-

ness of our remarks to-day upon the advisability of watching low-priced securities.

MISCELLANEOUS.—Anglo-American stock has fluctuated in response to rumours concerning the condition of the Direct United States Cable, and also upon the division of the stock into "A" and "B." Imperial Ottoman Bank shares have declined, while Lombardo Venetian have advanced, otherwise there is nothing calling for remark. A further recovery has taken place in home Government securities, as the result of the continued improvement of monetary affairs.

THE TIN TRADE—ITS POSITION AND PROSPECTS.

The prospects of the tin trade for the current year are decidedly brighter, and great hopes are entertained by tin miners that the present will be a very prosperous year for them. Reviewing the trade for the past 12 months Messrs. W. T. Sargent and Son, of Mining-lane, remark that in some respects tin compares advantageously with other metals, and shows a soundness and vitality which give a fair promise of more profitable trade in the future. The most noticeable feature is the expansion of the trade, both with regard to the supply and consumption. Except in England the production of tin has everywhere increased. No less than 11,000 tons of Straits tin was brought into the market, of which Great Britain took 7500 tons, the United States 3300 tons, and the Continent 200 tons. This output was obtained, notwithstanding reports of diminished production in Junk Ceylon and Laroot. Of Banca tin 4400 tons have been sold in Holland, and of Billiton 3525 tons in Java. This makes 7925 tons for 1875, against 7206 tons in 1874, showing an increase of 719 tons. Messrs. Sargent explain that of Banca tin only 2913 tons have been imported into Holland, and the Trading Company's unsold stock there has consequently diminished to 2127 tons at the close of December, as compared with 3858 tons at the end of 1874. Not being aware of any reduction of production in the Island of Banca, they infer that the Trading Company are reverting to their old custom of keeping considerable supplies in Batavia. The importation from Billiton into Holland have likewise been considerably less than the sales—say, 2648 tons—and they presume that the balance has been disposed of to the Eastern and other buyers.

In Australian tin, again, a considerable increase has to be noted. Our importations of metal alone amounting to 7218 tons, the ore that arrived was so trivial that Messrs. Sargent throw it out of the account altogether. The importations were from January to June 4705 tons, July to December 2513 tons, and the quantity estimated to be afloat is 2100 tons, against 2500 tons last year. The shipments for the whole year are 6590 tons. It is estimated that the English output has fallen by about 500 tons. This reduction, and the loss of about 1800 tons metal that had been received in the shape of Australian ores during 1874, has much diminished the importance of the English smelting trade, and the quantity of English tin exported during 1875 is fully 2500 tons less than in 1874. To the United States alone the deficiency is 1800 tons, that country having supplied itself more extensively with Straits tin instead of English. Subjoined is a summary of the various items of supply as compared with the three previous years, and the amount of increase is somewhat startling:—

	1875.	1874.	1873.	1872.
English production ..Tons	9,500	9,942	9,970	9,400
Banca sales	4,400	4,049	4,355	3,278
Billiton sales	3,525	3,151	2,980	2,046
Straits shipments	11,000	7,577	6,963	9,785
Australian supply	7,218	5,800	2,990	150

Total 35,643 30,528 27,258 25,644

Such palpable evidence of vitality on the part of production induces a feeling of wonder on the part of the trade as to their further capabilities in this direction, and it also makes them examine with considerable anxiety the power of absorption on the part of consumers to take off such large quantities.

Comparing figures, and assuming, in the absence of any positive knowledge to the contrary, that the reduction of the Trading Company's stock (1731 tons) is merely a change in the place of storage, and not a diminished production, it appears that consumption has taken off about 32,500 tons during the year 1875. This is by far the largest amount ever reached, and it is a little puzzling to account for it all. Home consumption, as represented chiefly by the tin-plate manufacture, has increased, but only by a very moderate quantity. The United States have taken actually less by about 500 tons, but Germany and France have taken a good deal more. The combined monthly deliveries of Holland and London, which represent the consumption of Banca, Billiton, Straits, and Australian, show a total, deducting the transshipment to the United States, of 18,499 tons in 1875, against 15,439 tons in 1874 (again deducting transshipments to the States, but adding the estimated quantity of Australian ores used), and 11,310 tons in 1873. This increase of consumption occurring in a year when most other trades have been either stationary or retrogressive, is a subject for great congratulation; and as it appears to be but the steady continuance of a natural growth, the consumption having more than doubled itself within the last 20 years, it may fairly be hoped that further progress will be made in the same direction during the year just entered. But large as the consumption has been, it has not sufficed to take off the production, which has been 2500 tons in excess of the consumption, and almost the whole of this excess is represented by increase in the London stock. Taking the magnitude of the trade into account, the stock should not be considered so excessive as it appears by a simple comparison with former years, when the consumption was much less. It is not a matter of surprise, with such a liberal supply of tin, and such a general disinclination for speculation as has been exhibited, especially during the last half of 1875, that the price of tin should have gradually fallen throughout the year. The fluctuations have been small, and the rise in value, when occasionally obtained, only of short duration. The year opened with a lively market for Straits tin at 96½, and it closes with a dull one at 81½. At the beginning of the year many parties were confident of a deficiency in the supply, and bought large quantities on speculation, now it is very difficult to find any who entertain similar views towards 1876.

The average price of English block tin for the whole of the year 1866, was 35½ per ton; rising in 1867, to 91½; in 1868, to 96½ 10s.; in 1869, to 123½; in 1870, to 126½; in 1871, to 137½; and in 1872, to 152½. In the following year there was a decline in the average to 133½ 10s., in 1874 it further fell to 100½, and in 1875 to 90½ per ton. The average of the 10 years was 113½ for English block, 116½ for Banca, and 110½ for Straits. Prices on Dec. 31 were 29½ below the average of the last 10 years, and 14 per ton higher than the cheapest year of that period.

The shipments of tin from Australia to London during the first three months of 1875 were 1766 tons, against 1040 tons in the corresponding three months of the preceding year; in the June quarter they were 1430 tons, against 1404 tons, in the September quarter 1391 tons, against 1484 tons, and in the December quarter 2004 tons, against 2155 tons; total 6591 tons in 1875, against 6083 tons in the preceding year; yet Messrs. Sargent think there are very unmistakable signs that the production—it would, perhaps, be more accurate to say the output—of Australia is diminishing, remarking that there is certainly less afloat now than 12 months ago. It stands to reason that a production stimulated by the prices of 1871 and 1872, which were 60½ per ton higher than those now current, should be checked not only in Australia, but speaking generally of tin producing countries, they fully believe that the present range of values will curtail production. During the past 20 years there has only been one year (1866) when the average price of Straits (80½) was below to-day's market, and that only by 1½ per ton; and that proved the precursor of rising prices, till 160½ was eventually reached. The average price of the last 10 years has been 110½ per ton, so that they cannot help feeling that the market offers at present considerable inducement to investors, who can afford to wait the result of so depreciated a value.

BRONCHITIS, COUGHS, COLDS, PAINS IN THE CHEST, SHORTNESS OF BREATH, &c.—Two of Dr. Leacock's Pulmonic Waters give immediate relief, and nothing else gives such a sound, refreshing night's rest, in rheumatic and nervous pains they act like a charm. Sold by all druggists at 1s. 1½d. per box.

ness is given to the magneto-electric machine of Bréguet, which is very simple, and apparently well adapted for mining purposes. As it can be arranged to fire four or five shots simultaneously by slight modification (it fires one only as usually arranged) it would seem to be as powerful as miners generally would require. Mr. Habets mentions a good form of electric fuse invented by Mr. Mahler (of Mahler and Eschenbacher); exteriorly it has quite the appearance of a Bickford fuse, but the place of the powder is occupied by two wires isolated from each other, and connected with the wires of the fuse proper. With regard to rock drills, those of Sommerer, Dubois et Frères, Osterkamp, Burleigh, the power jumper, and Azolino dell'Acqua are referred to, and the Burleigh and Colladon compressors are both described and illustrated, and Mr. Habets observes that the idea of applying the American pump to the compression of air may overcome the difficulties connected with the dry compressor, provided means of regulating it can be devised, but in this respect the machine exhibited by Messrs. Decker Brothers was very defective. Comparative trials of the Sachs, Osterkamp, and Burleigh drills favoured the latter. The Osterkamp was altogether out of the field, and the Burleigh did 2½ times as much work as the Sachs. The trial was in sinking, and care was taken to secure similar conditions. More appears to depend upon the stands than on the machines themselves.

The remaining volume embraces treatises on boring apparatus, and on the ventilation of mines and penetration into irrespirable gases. The system of sinking with rigid rods, as carried out by Messrs. Maugé, Lipmann, and Co., the successors of the well-known firm of Degoué et Laurent, is first described and illustrated. There is then a description of the apparatus of Mr. Wilmos Zsigmondy, which is worked with the Kleck free-fall apparatus; and, next, some excellent descriptions of boring with the rope, including the free-fall apparatus of Mr. A. Fauck and that of Mr. Von Sparre. With regard to ventilation and penetration into noxious gases, Mr. Habets refers to the Lemelle and Guibal, to Körting's aspirator for ventilating by the steam-jet, and the similar contrivance of Mr. Scott, of Manchester. Mr. Ladd's respirator, here known as the Tyndall respirator, is mentioned, and Galibert's apparatus is likewise referred to, but special prominence is very properly given to the aérophores Rouquayrol-Denayrouze, which are already well known to the readers of the Journal. The volumes are amply illustrated in the text, and are, moreover, accompanied by a number of well-executed lithographed plates to elucidate the matters described, so that a more complete outline of the present state of some of the principal apparatus used in mines and collieries could scarcely be desired. The work is one which should be appreciated in every district where mining is carried on.

COPPER AND TIN STATISTICS.—The new annual edition of Messrs. Vivian, Younger, and Bond's admirably executed chromo-lithograph of the copper and tin trades, showing at a glance the fluctuations in each month during the past ten years in the quotations for manufactured and Chili bar copper, tin-plates, and Straits tin, has just been issued, and certainly appears to have had even more care bestowed upon it than its predecessors. In addition to these particulars, details are given as to the stocks of copper in Liverpool, Swansea, and London, and Chili produce abroad, and the deliveries in Liverpool, Swansea, and Havre. With regard to tin, the sheet shows the stocks and quantities at London and in Holland, and the deliveries in London and in Holland; that altogether it will be a very useful chart to hand up in the offices of those connected with metal trades. The statistics for the last three years are also given in separate form, and afford a large amount of useful information.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

STANHOPE SILKSTONE COLLIERIES (Limited).—Capital 50,000l., in 100 shares. To acquire the estate, right, and title of Mr. Henry Lodge, in the minerals under lands called Barnby Hall, near Barnsley. The subscribers are—W. Lodge, Alpha Villas, Barnsley, coalowner, 100; J. Pickler, Todmorden, merchant, 200; Thomas Wilkinson, Ardsley, near Barnsley, coalowner, 100; J. Carnelly, Darton, coal merchant, 100; W. Hoole Chambers, Hill House, Craythorn, coal dealer, 300; Richard Cook, St. James-street, Sheffield, iron merchant, 50; and A. J. Dobson, Glassop-road, Sheffield, 10. The subscribers will be *ad interim* directors. The registration is not complete.

MITCHELDEAN COLLIERY COMPANY (Limited).—Capital 5000l., in 50 shares. To acquire the interest of Charles Phillips in the Newbridge Colliery, near Mitchelldean. The subscribers, who are all residents in Ross, Herefordshire, are—R. A. Smith, ironmonger; W. E. Prince, clerk; G. A. G. Coulthard, civil engineer; C. Bradshaw, attorney's clerk; W. Rudge, accountant; R. Powle, bookseller; and F. W. Wimple. The directors are—S. B. Noble, C. Phillips, and G. C. Coulthard. **BUENOS AIRES TRUST AND LOAN COMPANY (Limited).**—Capital 1,000,000l., in 20,000 shares. To carry on a financial business and agency in connection with Buenos Ayres, or any other portion of the Argentine Republic. The subscribers are—Melbourne Clark, Grove House, Dulwich Common, 50; P. N. Jones, Marlborough, near Abingdon, 50; George Evans, Whitehall, Chigwell, 50; G. Chinery, Hatherley Lodge, Anerley, 50; J. Blundell, 74, Grosvenor-street, 50; T. Johnson, The Avenue, Blackheath, 50; M. C. Despard, Surbiton, 1.

BAYSWATER CLUB AND SKATING RINK COMPANY (Limited).—Capital 20,000l., in 50 shares. To establish a skating rink at Bayswater. The subscribers are—Thomas Rutter, 25, St. Mary Axe, 10; J. Brown, 21, Lime-street, 10; J. E. Fullager, 39, Parliament-street, 10; R. O. Foster, 79, Elgin terrace, 5; G. Conway, 79, Kildare crescent, 5; J. L. Goodman, 18, Bayswater terrace, 5. **DEVON AND CORNWALL SKATING RINK COMPANY (Limited).**—Capital 20,000l., in 50 shares. To construct skating rinks, &c.

THE CONDES COMPANY OF CHILI (Limited).—Capital 80,000l., in 80 shares. To acquire mines, minerals, lands, rolling stock, &c., in Chili, according to an agreement made between Daniel Morris of the one part, and Thomas Baresy on behalf of the company of the other part. The subscribers (who take one share each) are—E. J. Heseltine, 9, Warford-court, stockbroker; William Baker, The Fern, Merton, merchant; J. Seacombe, 9, Fenchurch-street, mining engineer; J. Carr, Warford-court, stockbroker; E. H. B. Smith, 1, Warford-court, stockbroker; T. C. Margates, Stock Exchange; M. F. Dormer, 31, Balham-grove, Balham, accountant. The directors are—Messrs. S. L. Foster, William Sells, and Sir William Smith, Bart. The manager will be Mr. J. E. Dawson, 85, London Wall.

WATH-UPON-DEARNE MAIN COLLIERY COMPANY (Limited).—Capital 118,300l., in 500 shares. This company is formed for the purpose of taking over and working the Wath-upon-Deerne Colliery, in Yorkshire. The colliery has hitherto been worked privately, but now that more capital is required it has been converted into the joint-stock form. The first seven subscribers are—John Waring, Rotherham, colliery proprietor, 175; J. Waring, Bramley, near Rotherham, colliery proprietor, 175; G. Shaw, Sheffield, colliery proprietor, 175; G. Kenyon, Halifax, Wesleyan minister, 70; B. W. Sellers, Rawmarsh, Rotherham, mining engineer, 70; W. Sellers, Rawmarsh, Rotherham, colliery manager, 30; C. Cooper, Doncaster, merchant, 70. The directors are—Messrs. J. Waring, Joseph Waring, G. Shaw, G. Kenyon, B. W. Sellers, W. Sellers, C. Cooper, J. D. Peck, and James Crawshaw, the qualification being 20 shares.

FRENCH GUANA COMPANY (Limited).—Capital 120,000l., in 50 shares. To acquire concessions granted to Messrs. Ely and Gibson, and Smith and Ely, for mining, timber cutting, &c., in French Guiana. The company will carry on business as bankers, miners, merchants, contractors, shipowners, &c. The subscribers are—J. S. D. Tulloch, Major-General Bengal Staff Corps, 20, Ludbrook Gardens, 30; V. Cronwell, Brighton-road, Sutton, gentleman, 20; J. M. Roxby, Teignmouth, Devon, late an officer in Her Majesty's service, 20; G. De Winton, Selhurst, late an officer in Her Majesty's service, 20; E. E. Gibson, 25, York-street, gentleman, 20; A. De Bernales, director of the Paris Insurance Company, 60, King William-street, 20; W. B. Bull, Cromwell-road, Notting Hill, secretary. Registered without articles.

UNION LIGHTERAGE COMPANY (Limited).—Capital 20,000l., in 200 shares. To carry on business as lightermen, &c., on the Thames. The subscribers are—R. Grant, 1, Leadenhall-street, 50; C. Howard, 17, Philip-lane, 50; A. Howden, 10, Birch-lane, 50; F. Sewell, 109, Leadenhall-street, 50; B. Westray, 112, Fenchurch-street, 50; A. Gosman, 144, Leadenhall-street, 50; E. Moxon, 19, Birch-lane, 25.

AMERICAN COTTON TIE COMPANY (Limited).—Capital 500,000l., in 1000 shares. To acquire the goodwill and business of the American Cotton Tie Company, and various firms connected with the manufacture of cotton ties for bales. The subscribers are—W. Anderson, 22, Drury Buildings, Liverpool, 1; D. Rose, 4, Wellesley-road, Liverpool, 1; W. C. Watts, Canning-street, Liverpool, 1; J. Mackey, Smollett-street, Liverpool, 1; John E. G. Hill, 10, Water-street, Liverpool, 1; H. C. Duncan, 10, Water-street, Liverpool, 1; and John Marsh, 10, Water-street, Liverpool, 1.

BEN RHIDDYD HYDROPATHIC ESTABLISHMENT (Limited).—Capital 80,000l. To acquire a hydropathic establishment at Wheatley, York.

INSTITUTION OF MARINE ENGINEERS.—It is remarkable that whilst civil, mechanical, and mining engineers have each had their societies for the interchange of practical knowledge acquired by individual members of the profession, it is only now that an INSTITUTION OF MARINE ENGINEERS has been inaugurated. The code of rules and regulations has just been finally adopted, and appears calculated to facilitate to the utmost the attainment of the objects in view. It is mentioned that "in consideration of the great number of persons engaged in the various branches of marine engineering, the growing importance of the trade and the great interests involved therein, it has been deemed desirable to establish an Institution of Marine Engineers to watch over and protect the interests and welfare of all concerned; to diffuse sound and reliable information by the discussion of practical subjects, and generally to elevate and improve the condition of the marine engineer abroad; and further, to give employers in the mercantile marine greater facilities for obtaining sea-going engineers of undoubted practical experience and ability; and, lastly, to assist members who may, by shipwreck, have sustained a pecuniary loss, and so far as possible, to create a fund for the purpose of aiding members who, by reason of infirmity or advanced age, are unable to follow their profession." The President, Mr. N. P. Burgh, C.E., will deliver

his inaugural address during the current month, and it is understood that several important papers upon practical subjects are in course of preparation. The "Registry of Unemployed Sea-going Engineers," established in connection with the Institution, will, doubtless, prove highly advantageous both to employers and employed.

ECHOES FROM THE MINING MARKET.

A fall of 2s. per ton in the Cornish tin standards has led to further depression in tin stock. This move on the part of the smelters was generally anticipated, as for some days past the prices given for ores have been below the last official standard. Best tin can now only realise about 45s. per ton—a price quite inadequate to meet expenses—whilst prospects of any recovery in price seems at present remote than ever. It is, indeed, said that there are not wanting signs of diminished production in Australia, and some are inclined to augur favourably from this, but we are afraid any decreased supply can easily be accounted for by the present low prices, which, of course, tell heavily on the colonial producers as well as on home mines, and that any material rise in the price here would soon bring over increased quantities of ore to again check the markets.

In cheering contrast to the depressed state of tin shares, we have a most buoyant one for lead stock. The wonderful rise in East Van—from about 2½ to 13½, 14 (the closing price)—has greatly stimulated an already lively demand for shares, and, with scarcely an exception, all good stock is in great demand at increasing quotations. A large business has again been done in Van, East Van, Van Conso, West Chiverton, Pennerley, Pateley Bridge, Plynlimmon, Roman Gravel, Tankerville, West Tankerville, Great Laxey, and in other shares of minor importance. It is a good feature in the present buoyancy that the demand is chiefly in the well-known and sounder properties—those, in fact, whose pretensions to market fame may be said to have been established long ago.

A good dividend from Great Laxey is one of the features of the week. The distribution for the quarter is altogether 10s. per share (8s. dividend, 2s. bonus), being equal to 50 per cent. per annum upon the capital—a fact which needs no further comment; 500l. has also been added to the reserve fund. Tankerville is reported to be looking very well, and the shares are still difficult to obtain. The resolution passed at the late general meeting of West Chiverton, by which an annuity of 3000l. was voted to the committee, to take effect from the time they took office, has been somewhat modified, and it now stands as voting 3000l. for the past services of the committee, leaving future remuneration for the consideration of subsequent meetings. The shares are steady, and in better demand. The latest advices from East Van state the lode is cut into 14 ft., and is still producing good ore.

The following is the statement of the Cornish mines. A satisfactory report has been given to the East Pool adventurers, and a bi-monthly dividend of 4s. 6d. declared. The credits for the two months amounted to 8400s., and the debits to 5000s. The profit (1398s.) added to the previous credit balance (1300s.) made a total credit-balance of 15288s., out of which the dividend will be about 1440s., leaving a credit for the next account of 888l. We are glad to note that the Chairman stated in his speech that he did not believe in stocking tin. Our views, as we have frequently expressed them in these columns, are the same, and to more than one Western mine this ill-advised system has proved a disastrous affair. An asset valued on a depreciating market has not a cheerful appearance in a balance sheet.

It is believed Great Wheel Level will shortly be wound up. For some time past operations have been upon a very limited scale. Marke Valley has given a dividend of 2s. per share (9000s.), and the shares have advanced in consequence. We hear the lode in the 30 is worth 9 tons of copper ore to the fathom. South Carn Brea is very poor at present, and will probably continue to make calls upon the adventurers. At West Frances a stream of water has been cut in the 130 cross-cut, from which it is believed the West Frances lode is in close proximity. At Gargoll Mine the lode in the 24 cut is gradually improving. In the 11 cut it is also improving, and is called a very kindly lode. Wheel Jane shares since the meeting have been quoted 3 to 3½, but little is doing in them.

The Colliery Share Market is fairly active, the principal business being in Chapel House, Thorpe's Gawler Hall, and in one or two other shares.

In Foreign Mines there have been a good many transactions, but no advance of particular importance has occurred.

The next Banca sale of tin will take place on the 28th inst., when 23,800 slabs will be offered. JAMES H. CROFTS.

THE WEEK.

SAURDAY, JAN. 8.—Immediately after the Peru meeting, yesterday afternoon, some important fluctuations took place very rapidly in the 1872 loan, and during the day the bonds remained lower than they were previous to the meeting, which was considered anything but satisfactory. There was again a strong disposition shown to sell Egyptians, the 1873 loan rapidly falling from 62½, 63, to 61½, 61¼. This is supposed to have been the closing price, according to the morning papers, but long after the usual hours the stocks were bandied about in Throgmorton-street, until 60½ was reached. Like as on another Saturday in November, when Peru was forced down, most of the dealings were in the open street—a rare occurrence here, but one of the institutions of Paris. The directors of the City Bank announced that at the meeting on the 18th inst. a dividend of 8 per cent., free of income tax, will be declared, and 15,000s. will be added to the reserve fund, which will then amount to 150,000s. A second dividend, at the rate of 5 per cent., is announced by the Peel River Land and Mineral Company.

MONDAY.—The receipt of better prices from Paris (Sunday prices) produced a reaction in Egyptian stocks, the 1873 quickly advancing to 62½ and final 62½, 63. There was no stability in the market, and in the afternoon prices fell away considerably, large sales following, until 61½ was reached, when there was a recovery, and 61½ was maintained until 61½. It was announced that the direct cable had been repaired again, and the shares improved 7s. 6d., while Anglo shares fell ½. The report is one of Pawan and Company, and is much more satisfactory to the one for the previous half-year. There will be a dividend at the rate of 5 per cent. Lombards fell ½; Erie rose ½. A fall was announced of 10 per cent. in St. John del Rey stock. Brighton A shares improved to 11½, and North British to 12½, but further upward movements in home railways were checked by fears of high rates being charged for continuing stock to-morrow.

TUESDAY.—First day of selling for the Mid-January account. East Van shares are quoted 8½ to 8¾; contango 1s. per share. A heavy contango is being charged on Calcutta shares—¾ per cent.; 6 per cent. is being charged on Egyptians where speculators are not provided with the numbers. Great Eastern settlement discloses a weak "bull" account, and rates are stiff. The following are a few of the contingents that were current:—North British, ¾ to ¾; Metropolitan, ¾ to ¾; Brighton, 7-10ths to 9-10ths; Great Western, ¾ to ¾; Sheffield, ¾ to ¾; Erie, 10 to 10½; Ottomank Bank, 8d. to 1s. In the morning 5-10ths to 7-10ths was charged on Millers, but all the afternoon the market was found that the stock was not so good as jobs were glad to continue for nothing. It was noticed that the coupon for the general debt of Turkey would be paid, the Five's advanced to 2½, 2, while the 6 per cent. Loan of 1865 improved 2 per cent. The chief feature in the railway market was the important rise in North British to 12½, 12¾. Egyptians, after being weak, recovered in the afternoon to 62½, 63. Very little fresh business was done, however, the settlement absorbing all attention. The withdrawal of the rival Brighton railway scheme was announced.

WEDNESDAY.—Egyptians, 78s., opened very firm at 64½, and many purchases were made on the opening, but the market was not looking strong. There was a relapse later in the day, however, to 63½. Just at closing there was a rush to buy, the price advancing in a very few minutes to 65, higher than it has been for some days. The Brighton dividend was announced as 7½; when first received there was an attempt to consider it unsatisfactory, and a fall of 1 per cent. followed, but the stock quickly recovered. With the exception of Great Northern and South Western, where there was a decrease, and Metropolitan, Chatham, and North Western, where better returns were expected, the traffic in to-day was very satisfactory, showing good incomes. The North British dividend was 18,210s.; Midland, 4800s.; Great Western, 6197s.; and North British, 7968s. At the Union Bank meeting to-day a dividend at the rate of 15 per cent. was declared. London and North-Western fell to 14½, 14¾, and Metropolitan District to 4½, 4s. **THURSDAY.**—There was rather a limited attendance this morning, owing to the severe weather and the heavy fall of snow. Egyptian opened firm at last evening's prices, but soon gave way to 64, 64½, from which they again recovered 1 per cent. In the mining market the principal feature was a brisk demand for East Van shares, 11½ being offered, and ultimately 12½ for large quantities. The report issued by the Standard Discount Company shows a considerable falling off in the dividend, the distribution last year being at the rate of 12 per cent. as against 6 per cent. now proposed. The Metropolitan Bank will pay 8 per cent. The South-Eastern Railway dividend was announced as 7½ per cent. The directors of the Bank of England at their sitting made no alteration in the rate, and the return being considered very satisfactory, a feeling of firmness was added to the home markets.

FRIDAY.—The settlement was finally concluded yesterday, with only one failure—that of a broker with moderate liabilities. Considering that in Egyptians alone there was a fall of fully 10 per cent., the settlement must be considered to have been made on a satisfactory basis. A weak tendency, owing to the dividends declared, though very satisfactory, being less than was anticipated by speculators for a rise, who are now closing their accounts. When at mid-day the Sheffield dividend was announced at 4 per cent. there was a further fall round, 4½ having been anticipated. Sheffield fell at once nearly 1 per cent. It compares, however, very favourably with the dividend this time last year, which was only 3 per cent., the price then, however, was as much as 78s. Direct Cable shares are lower, the circular from the managing director repudiating that issued by the Messrs. Laxey, which advocates an increase in the dividend. East Van shares early in the morning advanced to 13½, 14s., the lode having further improved. A few dealings were reported in East Candon and San Pedro; towards the close railways and foreign bonds fell further; Egyptians declining to 64½, 65; Peru, 25½ to 26; Caledonian fell to 13½ to 13s.; North British, 12½ to 12s.; and Great Western, 11½ to 11s. The announcement of the Metropolitan dividend was not received up to the closing of the house.

FERDINAND R. KIRK.

WORKING BRAKES AND SIGNALS.—In working brakes according to the invention of Mr. R. D. SANDERS, of Birmingham, the exhaust tube under the carriages communicates with a small exhaust box from which tubes proceed in opposite directions. The ends of these tubes communicate respectively with rigid cylinders of different diameters having flexible pistons, the rods of the said pistons being connected respectively with the ends of a lever to which the brake blocks are connected. When the two cylinders are exhausted the exhaust in the larger one more than balances that in the other cylinder, and the brake blocks are drawn out of action. A valve is so arranged that the larger cylinder is exhausted without exhausting the smaller cylinder, so that when the vacuum in the pipe under the carriages is destroyed, the vacuum is also destroyed in the larger cylinder, but the vacuum in the smaller cylinder is preserved. The result is that the piston of the smaller cylinder rises and puts the brake into operation. An arrangement is described in which two brake blocks on opposite side of the same wheel are made to act by a clipping action. By means of a three-way-cock or valve in the pipe which connects the exhaust box with the smaller cylinder, signalling on the train may be effected. The stopcock or valve is operated by a passenger or other person pulling a cord or chain.

STEAM-BOILERS.—According to the invention of Mr. J. SHAW, of Low Walker-on-Tyne, a steam-boiler is constructed of a pair of equal and separate parts or sections. Each section is a cylindrical or other shaped casing, in the lower part of which is a cylindrical fire box extending through the section, above which are fire tubes extending through the section. The two sections are set back

to back with an enclosed space between them, into which the flames from the fire grates of both sections issue, and whence they pass into the fire tubes above, issuing into an uptake in the front of each section, which may lead into a chimney common to both sections. Both sections communicate with one and the same steam chamber at top by means of pipes provided with shut-off valves.

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

WHEEL AGAR.—A telegram has been received that the lode cut in the 170 cross-cut north is now producing rich tinstone. A report of which will duly appear in the Journal.

GREAT WHEEL VOR.—This mine is looking better than for two years past, the lode in the shaft being now worth 30s. per fathom, and most promising in character. For the third time Great Vor may become a great and valuable property.

EAST CARADON.—During the last few days much interest has been manifested with reference to this mine, owing to an improvement in the counter lode, worth 14s. per fathom, and in other parts of the mine. There will be a great increase in the next sale of copper ore. It is said upon the best authority that if the improvement continues there will soon be an important advance in the price of shares, which at one time reached 60s. per share, and it is the opinion of many mining agents of experience and of high reputation who have recently inspected the mine that the old palmy days will, in all probability, from the present prospects return again, whilst the beneficial effect it would have generally to the district. This mine is well managed, with every regard to strict economy, and is making a profit upon every sale of ore, and has been more than meeting its expenditure for a considerable time, and it is confidently expected that at no distant period it will resume payment of dividends.

WEST MARY ANN (Menhaiot).—The adventurers are somewhat disappointed in not finding the lode, as anticipated. The mine is still working in the hope to reach it.

WHEEL COATES (St. Agnes).—The prospects of this property are gradually improving. I have for several months read the Journal, and seen the sales of tin rapidly increasing. Last week I took a walk over the mine, when I found that the surface work was in active operation, and a new additional 16 heads of stamps already completed for an increase of tin dust. The tin is of good quality, and, from information, the lode is from 18 to 20 ft. wide. Operations for some time were rather limited; at that time the prospects were not so bright. But the directors having great confidence in the property, they, with the agent, used the greatest energy to sink the engine shaft to the 40 ft. level; and, by extending east and west at the 40, they are opening out a valuable mine. The sales of tin evidently show what perseverance will do in legitimate mining. After hearing several say Wheel Coates would never make a mine, I can only say I congratulate the shareholders on their success. The engine shaft is down to the 50, and preparations are being made to open east and west on a good lode. This will greatly increase the sales. The mine, at the present low price for tin, is more than paying cost.

LLANRWST (Lead). like the Van and East Van, is one of the most attractive investments in the Principality. The agent, in his report, states that on the completion of the dressing machinery he will be in a position to return about 50 tons of lead per month, giving a profit to the company of 5000l. per month, equal to 6000s. per annum. They have already 2550s. worth of lead ore at surface, and about 25,000s. worth of ore discovered as reserves below. Not a foot of ground has been stoped from the commencement, all the lead at surface has been extracted simply from the drifts, and that the company had one of the richest mines in Wales. As development was being continued the returns of ore would be considerably increased, the lodes were wonderfully improving in depth, the mine is entirely out of the category of speculation, and is one of bona fide investment.

ABERDAUNANT.—Looking at the important discovery which has taken place in East Van in cutting the Van lode, representing to be worth, so far as seen, from 50s. to 100s. per cubic fathom, causing the shares to advance within a few weeks from 25s. to 13s. 10s., and the Van shares have advanced from 27s. to 38s. each. The Aberdaunant is in the same district, about ¾ mile from the Van; their operations are being carried on on the same Van lode, indicative of similar results, and the company are raising and selling lead from the same, anticipating similar and important discoveries. The characteristics of the ground, the nature and composition of the lodes are identical. It is calculated that with a further outlay of 1500s. that they will arrive at similar results obtained by the Van and the East Van. Now is the opportune time for investors with their eyes open to secure, especially at the present low price, all the shares they can obtain in the Aberdaunant Mine.

GREAT LAXEY.—At a board meeting, on Wednesday, the directors declared a quarterly dividend of 8s. per share and a bonus of 2s. per share, being equal to 50 per cent. per annum on the capital. They have also carried a further sum of 5000l. to the reserve fund.

EAST CARADON.—The accounts presented at the meeting, held on Wednesday, showed a profit on a quarter of 57s. 3s. 3d., and assets over liabilities of 760s. 8s. 8d. The agents report an improvement in the 130, on counter lode, which is now valued at 12s. per fathom, with every indication of increasing in value as opened upon.

MARKET VALLEY.—The accounts presented at the meeting, held at Salisbury, on Wednesday, showed a balance at the last meeting of 5582l. 18s. Sales of ore—September, October, and November, 5251l. 12s. 4d.—5810l. 10s. 4d., against which the payments made are—October, November, and December costs, including lords' fees, &c., 3999s. 13s. 6d.; purchase of winding engine, 500s.; 13s. 6d., leaving cash balance in hand of 1310l. 10s. 10d. The statement of assets and liabilities showed, a net providing for a 2s. dividend declared at the meeting, a balance in favour of the mine of 1900s. 18s. 4d. Since the report was written a good discovery has been made in the 300 ft. level, where the lode has been cut into 6 ft. (and north wall not yet reached), and it will yield 8 tons, or 40c. per fathom.

SHEFFIELD.—Mr. J. R. Heard, stock and share broker, in his weekly report, says—Our local market has been steady during the past week, but very little has been done. Bilsen Iron Ore Company, 44 to 45; Bolew, Vaughan, and Co., 17 to 19 prem.; Charles Cammell and Co., 4 to 5 dis., 5 to 5½ dis., 5 to 5½ dis., 4 dis.; Ebbw Vale Company, 15½ to 15½ dis.; Hopkins, Gilks, and Co., 6½ to 6 dis.; John Brown and Co., 5½ to 6½ prem.; Midland Iron Company, 3 to 4 prem.; Parkgate Iron Company, 11½ to 12½ prem., 11 prem. to 12 prem.; Sheepsbridge Coal and Iron Company, 21½ to 21½ prem., 21½ prem.; Staveley Coal Company, "A," 4½ to 4½ prem.; Davy Brothers, 11½ to 11½ prem., 11½ prem.; Earl's Shipbuilding, 18 to 17 dis.; John Crossley and Sons, 3½ to 3½ prem.; Jos. Rogers and Sons, 20s. to 210s.; Palmer's Shipbuilding Company, 15½ to 15 dis.; Wm. Jessop and Sons, ½ dis. to 2 dis. to 2 dis.; London General, 10 dis. to 10 dis.; Company, 12s. to 13s.; Sheffield Tramway Company, 8½ to 8½, 8½; Sheffield Gas A stock, 208½, 208½; Sheffield Gas B stock, 207½, to 208½.

HALIFAX SHARE MARKET.—Jan. 13. The following quotations are from Mr. J. H. Thacker's list:—Halifax and Huddersfield Union Bank, 30; Halifax Joint-Stock Bank, 28½; Halifax Commercial Bank, 25; London and Yorkshire Bank, 28s.; John Crossley's, 13½; Whitworth and Co., 9; Elland Gas, 20; Rastick Gas, 15½; Bradford Brick and Tile, A, 24; B, 8; Charlsworth Brick & Tile, 24; Ripponden Commercial, 12½; Helton Bridge Cotton, 10; Yorkshire Boiler and Insurance Company, 21s.; Norton Brothers, 8 1-16th.

SATURN SILVER MINING COMPANY OF UTAH.—A petition for the winding up of this company by the Court of Chancery has been presented to the Lord Chancellor by Mr. James Johnston, of St. Margaret's, Upper Norwood, a creditor of the said company, and it will be heard before Vice-Chancellor Sir Richard Malins on Jan. 21.

The United States Rolling Stock Company announce that the first draft of the annual report submitted to the board recommends a dividend of 12s. per share.

A petition to wind-up the Swansea Collieries Company (Limited)

has been presented to the High Court of Justice.

Vice-Chancellor Sir J. Bacon has appointed Mr. S. Lovelock official

liquidator of the Consolidated Collieries Company (Limited).

The executive of the South Yorkshire Miners' Association have agreed to hand over to Mrs. Normansell, the widow of their late secretary, the sum of 1000s., which had been borne in the name of her late husband for the purpose of providing him with the money qualification of town councillor. A committee was also appointed for the purpose of raising a subscription for the family.

HOLLOWAY'S PILLS—EXCELLENT PILLS.—The resources of chemistry and medicine were long fruitlessly tried before they yielded a remedy which could overcome disorders of the stomach and nerves, till Prof. Holloway discovered his purifying and tonic pills. They are the surest and safest correctives of indigestion, heartburn, flatulency, torpidity of the liver, twitches, nervous fancies, despondency, low spirits, and declining strength. Holloway's pills supersede all irregular action of the body, and so strengthen and support the system that disease departs, and leaves the patient not all shaken; this is the grand aim and object of medical art to regulate disordered functions, without damaging the constitution by the remedy; and admirably is the end attained by Holloway's pills.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 30—Tan-y-Bwlch	50	214 13 6	Adam Eytton.	
Jan. 4—South Darren	15	20 2 0	Nevill, Druce, and Co.	
10—Bwdrain Conso	10	14 12 0	ditto	
12—Powell Consolidated.	16	14 12 6	Burry Port Company.	
— ditto	18	14 12 6	Sheldon, Bush, and Co.	
Van	58	15 6 6	Walker, Parker, and Co.	
— ditto	25	15 6 6	Adam Eytton.	
— ditto	50	15 8 0	Nevill, Druce, and Co.	
— ditto	50	15 9 0	ditto	
— ditto	150	15 8 6	Burry Port Company.	
— ditto	50	15 7 0	Sheldon, Bush, and Co.	
— ditto	14	15 6 6	ditto	
— ditto	100	16 3 0	Panther Lead Company.	
13—Foxdale	77	15 2 6	—	
—Talargoch	40	15 13 6	Walker, Parker, and Co.	
— ditto	40	15 13 6	Sheldon, Bush, and Co.	
— Pennant	12	15 3 6	Adam Eytton.	
—Part-y-Fydw	6	15 5 6	ditto	
—Roman Gravel	50	15 8 0	ditto	
— ditto	50	15 10 0	Sheldon, Bush, and Co.	
— ditto	25	15 7 6	ditto	
— ditto	25	15 7 6	Burry Port Company.	
— ditto	50	15 8 3	George Burr.	
—New Chiverton	7	15 6 0	Trefry's Estate.	
— ditto	9	8 3 6	South Wales Company.	

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purch
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BRITISH MINES.

Engineering shaft: This shaft, which is in regular course of sinking below the 160, is progressing favourably. The lode is 2 ft. wide, composed of quartz, mungie and capel. In the 61 west the lode is 3 1/2 ft. wide, and still produces saving work and ore. In the 62 west the lode is 3 1/2 ft. wide, and produces saving work. In the 63 west the lode, or part thereof, carried 2 ft. wide, continues to produce good stones of ore. In James rise, in back of the 100 west, the lode is 4 ft. wide, consisting of mungie, capel, quartz, and ore worth 2 tons, or 6¢ per ton. The new shaft is in the 64 west, and is in regular course of sinking. It is 100 ft. below the 160 level. Shaft, New South Lode: In the 160 west this lode is 3 ft. wide, consisting of mungie, capel, quartz, and ore worth 2 tons, or 6¢ per ton.

NEW CONSOLS.—Pryor and Bon, T. Jenkin, H. Vial, Jan. 9; Saturday seal being our pay day the following bargains were continued, being formerly set for two months. To stoep the back of the 74 m. level, west of Phillips's shaft, by six men, at 4s. per ton of stuff; the lode is 6 ft. wide for the part carried, and worth 24s. per fathom. To stoep the back of the 74, east of Phillips's shaft, by four men, at 4s. 9d. per ton of stuff; the lode is 4 ft. wide, and worth 16s. per fathom. To stoep the bottom of the 62, east of shaft, by four men, at 4s. 6d. per ton of stuff; the lode is 6 ft. wide, and worth 18s. per fathom. The stoep is the back of the 80.

ROMAN GRAVELS.—A. Waters, Jan. 18: Setting report: The 25 to drive north of the old engine-shaft, by two men, at 12¢. per fathom; lode worth 20¢. per fathom. The 95 to drive south of the shaft, by six men, at 16¢. per fathom; lode

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In the east side of the openings made by this slope we have met with a good branch of ore, on which we have commenced to open out by two men. In the course of a few days, or as soon as the 12 men employed in completing the winze from No. 1 to No. 2 level have finished their work, we purpose to resume the driving of the third cross cut west in Zero level, the driving of end south of fourth cross cut, on flat lode and branches in No. 2 level, and the driving of No 3 level in the mountain, on the quartz lode. —District of Pestarena: At Peschiera Mine, during the past month we have sunk the new incline shaft 5 m. 35 c.; and driven the 55 end north 7 m. 18 c., the

lode yielding 2½ tons per fathom; the 33rd and north 6 m. 65 c., yielding also 2½ tons of ore per fathom; and the cross-cut westward at the 33-3 m. 80 c. In Acquavite department, the 55 end advanced southward in December 5 m. 45 c., lode yielding stones of ore. On the surface fair progress is being made in cutting and sieging timber towards the mine, and in laying the roof on the mill-house. District of Bittigley: At Carl Mine we continue to drive by two men, the Taseo No. 1 pit; for some time past the lode has been poor, but I am pleased to say that in the present week it has improved, and is now yielding stones of good-looking ore, of which we shall make a trial next week.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Gunpowder, Dynamite, the Railway Companies; Colliery Explosions (C. Colwell); Notes on Sighill Colliery, Northumberland; Unflammable Wood; Mining in Queensland; South Australia Mining Company; on the Mineral Resources of Corsica; the Diamond, No. VI. (W. White); Gold in Wales, No. XV. (T. A. Readwin); Price of Shares in Mines; Separation of Minerals (F. J. King); Burrow and Butson Mining Company—Iron Industries of South Wales (B. Meade)—Foreign Mining and Metallurgy—Middleborough and Scotch Iron—the Quicksilver Market—Copper and Tin Statistics—the Antimony Mines in Queensland—Patent Matters, &c.—Meetings of the West Chiverton, East Pool, Australian Central, Imperial Brazilian Collieries, and Gauley-Kanawha Coal Companies.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JAN. 14, 1876.							
IRON.		£	s.	d.	£	s.	d.
Pig, G.M.B. f.o.b., Clyde.	3	5	6	—	—	—	—
Scotch, all No. 1	3	6	0	3	15	0	—
Bars, Welsh, f.o.b. Wales	6	10	0	7	10	0	—
in London	7	10	0	7	12	6	—
Stafford.	8	15	0	10	5	0	—
in Tyne or Tees	7	0	0	—	—	—	—
Swedish, London	15	10	0	—	—	—	—
Rails, Welsh, at works.	6	5	0	7	0	0	—
Railway chairs	—	—	—	—	—	—	—
spikes	—	—	—	—	—	—	—
Sheets, Staff., in London	5	0	12	15	0	—	—
Plates, Staff., in London	10	15	0	12	10	0	—
Hoops, Staff.	9	15	0	10	5	0	—
Nail rods, Staff. in Lon.	8	15	0	9	13	0	—
STEEL.							
English, spring	16	0	25	0	0	—	—
cast	35	0	0	50	0	0	—
Swedish, keg	18	10	0	—	—	—	—
fag. ham.	21	0	0	—	—	—	—
LEAD.							
English, pig, common.	23	15	0	23	0	0	—
" " L.B.	23	0	0	—	—	—	—
" " W.B.	24	0	0	—	—	—	—
" sheet and bar.	24	0	0	—	—	—	—
" pipe	24	10	0	—	—	—	—
" red	24	0	25	0	0	—	—
" white	24	0	25	0	10	0	—
" patent shot	27	0	0	—	—	—	—
Spanish	22	0	25	5	0	—	—
SPELTER.							
Silesian or Rhensish	25	0	0	25	10	0	—
in English port	25	0	0	—	—	—	—
English, Swansea	26	0	0	—	—	—	—
Sheet zinc	21	0	0	32	0	0	—
TIN.		£	s.	d.	£	s.	d.
English, ingot, f.o.b.	83	0	0	84	0	0	—
" bars	85	0	0	—	—	—	—
" refined	86	0	0	87	0	0	—
Australian	78	10	0	—	—	—	—
Banca	86	0	0	—	—	—	—
Straits	79	0	0	79	10	0	—
QUICKSILVER.							
Flasks of 75 lbs., ware.	10	10	0	—	—	—	—
COPPER.							
Tough cake and ingot.	84	0	0	86	0	0	—
Best selected	87	0	0	88	0	0	—
Sheet and sheathing.	93	0	0	—	—	—	—
Flat Bottoms	97	0	0	98	0	0	—
Wallerode	89	0	0	98	0	0	—
Burra, or P.C.C.	83	10	0	—	—	—	—
Other brands	86	0	0	88	0	0	—
Chill bars	81	0	0	82	10	0	—
BRASS.							
Wire	9 1/2	d.	—	—	—	—	—
Tubes	9	—	12d.	—	—	—	—
Sheets	9	—	10	—	—	—	—
Yellow metal sheathing	7 1/2	—	8 1/2	—	—	—	—
Nails composition	9 1/2	—	10 1/2	—	—	—	—
TIN-PLATES.*		per box.					
Charcoal, 1st quality	1	9	0	1	10	0	—
" 2nd quality	1	5	6	1	7	6	—
Coke, 1st quality	1	3	0	1	4	0	—
" 2nd quality	1	0	0	1	2	0	—
Black	17	0	0	17	10	0	—
Canada, Staff. or Gla.	13	0	0	13	10	0	—
at Liverpool	13	0	0	13	10	0	—
Black Taggers, 450 of	30	0	0	—	—	—	—
14 x 10	—	—	—	—	—	—	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box below 1C quoted above, and add 6s. for each X. Tern-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The markets have remained steady during the week, and nothing has arisen to produce any change in the position of metals. Although the amount of business actually transacted still continues to be very limited, it is mostly of a sound, and so far of a satisfactory, character. The existing demand for shipment and home consumption suffices to keep stocks in producers' hands generally low, and the supply is, so far as it can be limited to the demand. Until a revival of the trade of the country, the general complexion it cannot be expected that things should wear a different aspect; but, upon an stiffening in the market, prices somewhat in advance may be looked for; but doubtless the cause which was in operation last year to keep prices steady still exists—the means being in readiness to supply whatever demand is likely to arise and the sharp competition resulting thereon—so that no material advance in price may be expected for some time. While the merchants of position and respectable standing, and who from long experience are well aware that there is a time to refrain from operating, as well as a time to operate, are rather disposed not to press business at the moment, there are some who, having everything to gain and nothing to lose, who are endeavouring to ship and undersell regular shippers. Such men are those who have already, perhaps, on more than one occasion, swelled the list of bankrupts, and, having paid but little or nothing in the pound, are once more attempting the same losing game, which, if it only affected themselves, would matter but little; but, unhappily, it cripples the business of the cautious merchant, who will not act unless he sees a prospect of legitimate profit, and involves the unwary, it may be, in serious loss.

It is a matter of regret that neither the action of the law nor the verdict of public opinion is such as to form a wholesome check to the operations of a damaged commercial reputation. It is by no means an exceptional or isolated case that a firm whose reckless trading, to say the least of it, has resulted in bankruptcy, or whose affairs have been settled under private arrangement, springs up mushroom-like in new offices under, it may be, some new designation, to repeat a series of operations which bring about only a repetition of previous disasters—the principal promoters being always those who suffer last, or who by skilful manipulation so much or other raise a golden harvest out of that which impoverishes their more scrupulous neighbours. The commercial world itself is chiefly to blame. There was a time within the memory of business men, still occupying their ground in the City of London, when failure was synonymous with disgrace, and for a considerable time at least those who had made shipwreck of their commercial ventures were sentenced to a prolonged period of ostracism; but they manage these things differently now, and it is very questionable whether the new regime is preferable to the old. The Bank return published yesterday was favourable, and there is no change in the rate of discount, which stands at 5 per cent.

COPPER.—The market has been quiet but steady throughout the week, with hardly any variation in quotations. Business is reported in Chili bars at about 21½ g.s. usual cash; Wallaroo, 89½ 10s., and Burra 89½. English is dull of sale. Tough copper is quoted 86½ to 87½; India 4 by 4 sheets, 93½; and yellow metal 74½ to 8d.

IRON.—Once more the wages question has entered upon a new phase, but it may be that while these remarks are passing through the press the threatened difficulty may already be averted by the good sense and the wise measures adopted by the Council of the Iron Trades Employers' Association, which meet this day for the consideration of questions of vital importance to be brought before it. At the beginning of the week a number of workmen in the employ of Messrs. Eastons and Anderson, at Erith, some 200 men, struck work. This of itself is not a matter of more than local importance, but the point in dispute between these men and their masters is one of national importance, and inasmuch as they are supported in the action they have taken by a powerful and wealthy organisation, it is impossible to say to what extent the dispute may grow, or how serious the consequences involved may be. The question at issue is this. Upon some new work being apportioned to the men, it was intimated to one of them that he would be paid by piece work. The men in a body declined to submit to this arrangement, and struck work. They are supported in this decision by the Amalgamated Society of Engineers, which it is said has funds at its disposal amounting to about 150,000. The point that the Iron Trades Employers' Association is called upon to-day to decide is whether or no the workmen in the employ of the association should be subject to a general lock-out, so as to defeat the action of the Amalgamated Society of Engineers. The magnitude of the interests at stake may be gathered from the computation that the association pays away weekly wages amounting to upwards of 150,000. Upon the action taken to-day depends the employment or enforced idleness of thousands of engineers, mechanics, boiler-makers, *cum multis aliis*, throughout the kingdom, and, indirectly, thousands more will be affected by the judgment arrived at. It is computed that the fortunes of not less than 70,000 are involved in the decision.

It would be useless to deny that a most important principle is at stake, and one for which battle has already been waged, so that particular care will be needed in the conduct of the meeting, lest party feeling gets the better of sound judgment and prudence. The Amalgamated Society of Engineers, who are already in force, but the extension of principle where not already introduced. One of the own officers is reported to have said "It is a well-known fact that the Amalgamated Society of Engineers have long been opposed to the systematic extension of the piece-work system, because they know the result to which it leads." Again, in meeting assembled at Manchester some four years ago the following resolution was carried that "piece work is without doubt the worst evil that workmen have to contend against," and the ground upon which this conclusion was based were that it placed workmen in selfish competition with one another, that it tempted them to work overtime, and beyond their strength, to the injury of their health, to the prevention of the improvement of opportunities of self-culture, to the denial of the pleasures of sociality, and to the cutting off from others of the means of subsistence. Thus it appears that the Amalgamated Society by its own showing sets its face against the most obvious and the simplest mode of settlement of a most important question, and the objections urged are the most apparent and the most sophistical in the world. A master or foreman who has the settlement of the rate of a workman's wage when paid by day labour placed in a very difficult and invidious position. It is, in fact, almost an impossibility correctly to gauge a man's capabilities.

It is just as likely as not that a skilful hard-working conscientious man will be underpaid as that a pretentious fair-spoken idler may receive more than his due. Piece work puts a stop to all this. Again, it is much more probable that the industrious man who earns a large wage by piece work will prove to be the man who takes advantage of the opportunities for self-improvement and so forth than he who idles away his time and receives payment for work he never did and never intended to do. Piece work is an incentive for the skilful and industrious artisan. It teaches him self reliance, and he does his work with a will, because he knows that he is thereby not only providing for the present, but laying up store for the future.

Wherever it is practicable to introduce piece work it should be introduced, and just so much will the wages difficulty be overcome, but over a very large field of industry it is impossible, from various causes, to introduce piece work, and in these cases the difficulty must be met as best it may.

The report from the North of England is certainly more favourable in some respects than it has been. In finished iron, which has been so very dull, there is more activity. The shipbuilding trade in the North is looking up, and the consequent demand for iron plates is improved. In the rail trade, which is the main source of wealth in this district, there is no present improvement to record. The enquiries which have lately been floating about have not resulted in any increased vitality, still it is hoped that as the season advances work will come in more freely, but it will be some time before a restoration of normal activity can be attained. The condition of the pig-iron trade is satisfactory. The demand during December was sustained. The month's make was 172,000 tons, showing an increase upon output of the previous month of 6000 tons, while the increase of stocks in makers' hands was only 2500 tons, and stocks are very low. The year's consumption of pig iron is estimated at upwards of 2,000,000 tons, so that it can hardly be said, notwithstanding the unsatisfactory state of the trade generally, that it has altogether deserted the country. The quotations for pig iron are firmly maintained, and in the face of the continued demand for home consumption and shipment abroad, it is not likely that lower values will rule. Rails are quoted of heavy section 6½ 15s.; plates, 7½ 15s. per ton.

The Scotch pig-iron market opened firm at the beginning of the week at an advance upon the closing quotations of last week, business having been done up to 65s. 3d., with buyers at the close. On Tuesday a large business was done, prices varying from 65s. 10½d. to 65s. 3d. cash, and 65s. 1½d. to 65s. 4½d. one month. On Wednesday prices were easier, and the market quiet. Yesterday business was reported from 65s. to 65s. 6d. cash. To-day's price of m.m. is 65s. 6d. cash and 65s. 9d. one month.

Two weeks ending Jan. 9, 1875 Tons 12,857
Two weeks ending Jan. 8, 1876 10,200

Decrease for 1875 2,657
LEAD.—Throughout the week the tendency has been towards somewhat lower values, and good soft English pig is now obtainable at 22½ 15s., and soft Spanish without silver 22½.

SPELTER.—The market is quiet. Ordinary Silesian is quoted 22½ 7s. 6d. to 22½ 15s.

QUICKSILVER is quiet at 10½ 10s. per bottle.

TIN.—During the early days of the week the market was quiet, but towards the close greater firmness was observable, and a fair business done at current quotations. Straits tin selling at 79½ 10s. cash, and Australian about 1½ under. There is very little doing in English tin.

TIN-PLATES.—There is no change to report.

THE IRON TRADE.—(Griffith's Weekly Report).—Friday Evening. The Glasgow market for Scotch pigs has been steady all the week, closing this afternoon 65s. 6d. cash, sellers. The market was firm all day to-day. The price to-day is from 9d. to 1s. better than it was this day week for g.m.b. iron. Prices rule exactly the same in London. We quote makers No. 1 iron—Gartsherrie, 77s.; Coltness, 81s.; Calder, 80s.; Langloan, 77s. 6d.; Summerlee, 72s. 6d.; Monkland, 78s. 6d.; f.o.b. Glasgow, Glengarnock, 72s.; Elgin, 67s. f.o.b. Ardrossan, 77s. 6d.; f.o.b. Leith, 68s. f.o.b. BoNESS. The ironmasters' quarterly meeting was held in the Town Hall at Birmingham yesterday. Although the weather was decidedly adverse to the meeting a very large and influential gathering, as usual, took place in the Town Hall, London, Liverpool, Manchester, Sheffield, Barrow, and the West Coast, Shropshire, and South Wales, were well represented.

The tin-plate makers of all districts, with the most important merchants of Liverpool and London in this department, were present in the Hall. The crowded condition of the principal hotels in Birmingham proves beyond doubt the growing importance of the Ironmasters' Birmingham Quarter-day. There was no official change of prices, either in pigs, finished iron, or tin plates, nevertheless the market was firm for pig-iron all round. Hematite pigs particularly presented a hardening tendency, and in some cases the West Coast smelters obtained from 1s. 3d. to 2s. 6d. more money for hematite pigs. The sales, however, were not extensive in this kind, which were certainly most in favour at this Quarter-day.

The largest sales of pig iron were effected by the Lillieshall Company. These reached upwards of 11,000 tons at last Quarter-day's prices. The usual contracts were entered into for Blaenavon, which fetched 8½ per ton; Stanner and Co.'s Apele, Earl Granville's Ettrick, Sparrows Fawld, the West Yorkshire Company's "Leeds" brand, the Chatterley Coal and Iron Company, Whitwell's Thornaby, and the makers in the Frodingham district.

The business done in the native mine pigs of the district was only to a moderate extent, and the parcels of this class which did change hands were sold without the slightest abatement on December prices. The finished iron market presented a quiet aspect. The orders given out were those required to replenish the stocks of the London, Bristol, and Manchester merchants; enquiries for finished iron for shipment were not numerous. The business done in this department was not, on the whole, up to the usual average. Neither the makers nor the merchants seemed disposed to go into large transactions. The meeting at the Town Hall closed as it opened, without the slightest animation or extended business in any department of the trade.

Messrs. Vivian, Younger, and Bond.—COPPER: There has been a moderate business in Chili bars, at 81½ to 81½ 10s. for good ordinary brands and 81½ 10s. to 82½ 5s. for picked brands, the chief enquiry being from the smelters, who have taken several parcels at Swansea, mostly lots, at 81½ to 81½ 5s. Prices are unaltered for English sorts, and the demand keeps very slack. Sales of Wallaroo are reported at 89½, and other brands 88½ to 88½, as in quality.—TIN: There is not much change to note during the week. Sales of Straits reported down to 78s. 6d., and Australian floating down to 78s., closing, however, buyers at 10s. over current quotations. English, at about 83s. 6d. for common ingot, meets with small enquiry.—IRON: The usual quarterly meeting is taking place at Birmingham to-day.—SPELTER steady.—LEAD rather easier.

Mr. Murrant.—TIN: In foreign no alteration has occurred during the week; buying at moderate rates for forward delivery is, however, difficult to manage. The impression that lower prices may yet rule in this article appears to have gained some ground, but the probability is that values will depend largely upon the supplies which may be received from the Straits and Australia. The Straits Straits and Australian, at 78s. to 80s. for cash and shipment.—COPPER: Chili has receded about 10s. during the week. The friends of the article are, however, if possible rather more confident than usual, and assert that present prices will be maintained, if not advanced considerably, during the current years. The transactions of the week are supposed to be 395 tons of g.o.b.'s and named marks, at 81½ to 81½ 10s. for cash.

Messrs. James and Shakspeare.—COPPER: About 400 tons of Chili ore, on spot Swansea, sold at 10s. 6d. per unit, Liverpool smelters paying the same figure for about 1400 tons of Mexican, to arrive in that port during the spring. Bars at one time showed a slight tendency to decline, and an isolated sale of good ordinary brand was reported at 89½ 15s. sharp cash. This reduction, however, brought in a rather strong enquiry; and buyers, finding themselves unable to secure further parcels at that figure, have since paid 81½ to 81½ 15s. per ton. In picked and special marks no transactions are reported; in fact, the quantity in stock is so limited that consumers are compelled to pay extreme rates if their requirements necessitate purchases of such sorts. Australian descriptions have participated in the prevailing dullness, and we hear of business in Burra cake at 89½ 10s. in Wallaroo at 89½ per ton, a portion being for export to the East, from whence some rather large orders are now offering at a reduction of about 20s. per ton on the last week's prices. Smelters report a dull market for English; but the high price of furnace material prevents reduction, although that would secure a fair trade.—TIN: English is a little easier, but smelters' rates nominally unaltered. Foreign shows no particular change since we last wrote. Business has been reported in Straits at 79s., and Australian at 78s., cash, but higher figures were subsequently touched.—LEAD is scarcely so active as at the opening of the year, and values may be called about 2s. 6d. lower.—SPELTER is very firm, and, with an interruption in the navigation, higher prices may be looked for.

Messrs. Henry Rogers, Sons, and Co.—IRON: Scotch pigs are again higher; Middleborough have also advanced about 2s. per ton, and there is a fair demand at the increased prices. Finished iron is firm both in Staffordshire and the North of England, in sympathy with pigs. At the quarterly meeting, held yesterday in Birmingham, it was decided to make no alteration in the rates of the "list" houses. As this will steady prices, it may now hope for some improvement in the demand.—COPPER: Chili bars have receded 10s. per ton since our last report; but little business is doing from day to day. English manufactures for home use maintains its price. Indian sheets are, however, almost entirely neglected.—TIN: Straits advanced to 80½, but has since receded, and is now quoted 79½ 10s.; Australian, 78½ 10s.—SPELTER is firm in consequence of higher rates on the Continent. Here, however, values seem to be stationary.

THE MINING SHARE MARKET has been particularly active this week; large bona fide transactions have taken place in several mines at advanced rates, and the demand for prominent shares rather increases than otherwise.

Lead, copper, and a few gold mines, however, are in the ascendant, and tin mines, since the announcement of a further decline of 2½ per ton in the standard for ore, on Tuesday, have been entirely neglected.

The settlement of the fortnightly account was more than usually heavy, and offered a great contrast to its predecessors of last year.

The mines most in demand have been East Van, Van, Parys Mountain, Santa Barbara, Tankerville, West Chiverton, Pateley Bridge, Wheel Crebor, West Tankerville, Roman Gravels, Marke Valley, Pennerley, Prince of Wales Eberhardt, and a few others.

Van shares reached 38 to 40, and leave off 38 to 39 ex div. East Van, in which a very large amount of business has been transacted, opened on Monday at Saturday's prices, 7½ to 7½, and left off 8 to 8½; on Wednesday opened at 9, and advanced to 10 10½; Thursday 10½ to 11, advanced to 12, and then left off weaker at 11½ to 12; on Friday opened at 13, rose to 14, then dropped to 12½, and after various fluctuations leave off 13½ to 13½. The rise in a fortnight is equal to 150,000, and has given great life to the market. The lode has now been cut into rich for 14 ft. Van Consols are better at 2 to 2½, and seem likely to improve.

Roman Gravels, 11½ to 12½; the sale of lead ore (200 tons), realised 3083½ 15s. for the month. Great Laxey, 16 to 17; the direc-

tors have declared a dividend of 8s. per share, and a bonus of 2s., adding also 500l. to the reserve fund. Tankerville, 11 to 12; this mine has sampled this week 150 tons of lead ores for the month. West Tankerville in demand at 1 to 1½; the points of operation reported on this week are worth in the aggregate 127½ per fathom. Pennerley shares have been largely dealt in at 25s. to 30s.; the lode in the 120 west is worth 1 ton of lead ore per fathom. Bog, 7s. to 9s.

East Pool, 13 to 14; at the meeting, in Cornwall, the accounts showed a profit on two months' working of 1393½, and a balance in hand of 1529½, and a dividend of 4s. 6d. per share (1440½) was declared, leaving a credit balance of 88½ 13s. 7d. The accounts are charged up to Oct. 9. The tin ores credited to Dec. 30 are 2597½ 12s. 8d.; tinstone, 1560½ 2s.; copper ore, 1106½ 8s.; arsenic, 900½; in the statement of assets and liabilities there appears to be due to the merchants 6234½ 13s. 4d.; royalties, 604½ 8s. 8d. On the other side credit is taken for bills receivable, 3272½ 3s.; costs uncharged, 4482½ 15s. 3d.—Nov. 4, 1491½ 18s.; Dec. 4, 1476½ 3s. 2d.; Jan. 1, 1864½ 14s. 1d.

The 180 east is worth 15½ per fathom, and is now within 10 fms. of the barrier between this mine and Wheel Agar. The 180 west is worth 18½ per fm. Wheel Agar shares enquired for, at 2½ to 3; the lode at the shaft is very large, and the agents expect a good improvement ere long. Carn Brea, 37 to 39; Bedford United, 22s. 6d. to 27s. 6d.; Devon Great Consols, 4½ to 4½; no particular change here. The winze in Welsh is worth 50½ per fathom.

Parys Mountain have been in good demand, and leave off 14s. to 16s.; the 90 cross-cut, towards the great open-cast is getting into more favourable ground for driving. The quarter's precipitate, 75 tons, yields an average produce of 14½ per cent. During the last six months the returns of ore have been 3834½ 15s. 6d., and the total costs during the same period 3769½ 2s. 5d., showing a small profit. The mine, therefore, is doing well and improving its position from its present resources; but the great point of attraction just now is the 90 cross-cut south. This has been going on for some years to get under the great open-cast, from which, it is said, upwards of five millions sterling profit was realised by the Anglesea and Dinorben families. This open-cast for years flooded the market with copper, and was worked to a depth of about 60 fathoms only. The present attempt at the 90 cross-cut is the first, we believe, to prove what there is below the 60; it is naturally, therefore, regarded with great interest, and is now on the point, we are informed, of intersecting a lode running parallel to the open-cast.

Dolcoath, 39 to 41; East Caradon, 2½ to 3; Gawton, 5s. to 10s.; Great Wheel Vor, 2½ to 3; Hingston Down, 17s. 6d. to 22s. 6d.; Ladywell, 2½ to 3; Marke Valley, 3½ to 3½; at the meeting, at Salisbury, a dividend of 2s. per share was declared. Old Trebugetts are getting in demand at 5s. to 7s. 6d. Penstruthal, 8s. to 10s.; Plympton, 8s. to 10s.; Prince of Wales, 4s. to 6s.; Pateley Bridge, 5½ to 6½; St. Patrick, 1½ to 1½; New Hendra, 20s. to 25s.; Cathedral, 20s. to 25s.; South Carn Brea, 25s. to 30s.; Toxta Caradon, 120 to 140; South Crofty, 17½ to 20; Trebeigh Consols, 7s. 6d. to 8s. 6d.; Unity Wood, 30s. to 32s. 6d.; West Basset, 5½ to 6; West Chiverton, 16 to 17; West Frances, 8½ to 9; West Seton, 3s. to 40; West Tolgus, 59 to 61; Wheel Basset, 25 to 30. Wheel Crebors are in demand at 2½ to 3½; the lode in the 48 is improving. Wheel Grenville, 1½ to 2½; Wheel Killy (St. Agnes), 2 to 2½. St. Agnes Consols, 5½ to 5½; the lode in the 72 west is reported worth 15½ per fathom. There are 40 tons of copper ore for sale, and a small parcel of tin has fetched 46½ 10s. per ton. Old Tincroft, 4½ to 4½; the stamps will go to work this month.

Eberhardt and Aurora, 8½ to 8½; the advices show a profit on the month of 5475½. The bullion produced was 11,875½; costs, 6400½. St. John del Rey, 380 to 400; the produce for the month is 18,793½. Don Pedro, 2½ to 3½; the produce for the month is 4300 tons. Santa Barbara has been in great demand, and leave off 1½ to 1½; this mine is in 40,000 shares, limited to 10s. each, 9s. 6d. paid up, and it is proposed, we understand, to call up 6d. per share, making the shares fully-paid. The profit for the six months ending December is estimated at 3000½, or equal to a dividend of 1s. 6d. per share, being 15 per cent. for the half-year. Cape Copper, 33 to 40; Emma, 1½ to 1½; Frontino and Bolivia have advanced to 2½ to 2½; Argentine, 6½ to 7; Richmond, 7½ to 7½; San Pedro, 2½ to 2½; Sweetland Creek, 2½ to 2½; Gold Run, 16s. to 18s.; gold washing was expected to commence about Dec. 22.

The Market for Mine Shares on the Stock Exchange during the week has been animated throughout, and the volume of sound business taking place contrasts remarkably with the dullness and inactivity so long characterising all departments. The limited business hitherto transacted tended to nominally depress quotations to a level tempting to purchasers, the result being a few enquiries sufficient to stimulate values. The business now is much more general than of late, the several discoveries and improvements having completely changed the tone of the market, which closes with more buoyancy than for a long time past. To no small extent is the demand aided by the satisfactory condition of the market for most metals, and the expectation that, however slowly may have been the improvement in this respect, the more likely it is to be gradual and permanent.

Lead Mines have again been most prominently in request, nearly all leading descriptions showing a further appreciable advance in price. Van, 33 to 40 (ex div.); the usual monthly report appears in another column. The mine is looking well in every respect. The sale on Thursday (500 tons lead and 210 tons blende) realised 8629½. East Van shares have risen to 13½ 13½, and an active market. Capt. Williams, the manager, has written to the effect that the shareholders can rely upon a large and profitable mine; the lode has been cut into about 14 ft., and still holds good, with every indication of further improvement. In the official reports received early in the week the lode was valued at 50½ per cubic fathom, and it has now been cut into 2½ fathoms, holding good. West of this discovery, up to the boundary of Van, there are 100 fathoms of unexplored ground, and east 100 fathoms.

Pateley Bridge shares have risen 5½ to 6, large transactions taking place; the main horse level, drained by the Eagle level, has been re-laid with iron rails, and is now in working order. Sinking has been commenced upon the Sun vein, drained by the Eagle level to a depth of about 60 fms. under the old workings; this shaft is proposed to be sunk 30 fms., and to drive out on the course of the lode, which was very productive in the level above; also to put out cross-cuts from the deeper part to intersect the other lodes in this section of the property. The agents are of opinion that by this plan the whole of the lodes will be unwatered at a comparatively small cost by means of the Eagle level, leaving 50 or 60 fms. of backs completely drained. Inspection has satisfied the agents that this Eagle level can be driven at an immense saving in time and money as compared with driving the Perseverance level, and it is absolutely known the Eagle level has already drained this series of mines to a depth of 60 fathoms; from this point, as soon as the shaft has been sunk on the Sun vein, levels can be driven north and south to cut the other veins, drained by the natural dip. In the 20 fm. level cross-cut from the engine-shaft, strings or feeders of solid lead have been cut, and the intersection of the lode can only be a question of a very short time, which is an important feature. The other parts of the mine are looking well, and smelting continues regularly.

Wye Valley, 5½ to 6½; this mine, which came into the possession of this company in 1873, is situated south-west of Van, and on the authority of Mr. Walter Eddy contains the Van lode. The shaft has been sunk 34 fathoms below adit, and levels driven east and west at the 12 and 22; a fine bunch of ore was met with the adit, and in the 10 east this deposit opened out considerably, already driven through for nearly 30 fathoms at a value of from 50l. to 100l. per fathom for the entire distance; the present 22 fathom level end is 20 fms. behind where this deposit was first discovered in the upper workings; the strength and general character of the lode gone down in the sole of the 10 indicate a continuous improvement in the 22. The monthly sales are at present 40 tons, but a large increase is expected shortly; efficient and extensive machinery has been provided, with the latest improvements in self-acting dressing machinery.

Van Consols have advanced in sympathy with East Van, 2½ to 2½; the new drawing-shaft will shortly be finished. The lode under the bottom level is improving for lead ore. Great West Van, ½ to ½; the lode in the 46 has not been taken down since last reported on

as worth 18 cwt. of lead per fathom. The frost has impeded the works during the week, but it is fully expected that this level is entering on a good course of lead ore. Cathedral, 20 to 25s.; the lode in the engine-shaft has improved. Grogwinion, 4 to 5; the half-yearly meeting will be held on Tuesday. West Wye Valley, 3½ to 4½; the severe frost has to a great extent stopped surface operations. The mine is steadily improving, and the discoveries in the 14 and 26 fm. levels continue to improve. Pennerley, 1½ to 1¾; there are several points in the mine, as indicated in the agents' report, likely to improve, otherwise the mine shows but little alteration. The various operations are progressing as usual, although dressing, &c., is hindered by the prevailing severe weather. Melindur Valley, 2 to 3; the mine continues to improve. South Cwmystwith, 1½ to 2; the lode in the middle and upper levels is opening out very productively, and good progress is being made in developing the ore ground, so that as soon as the frost and snow disappear steps can be taken towards getting ready for dressing and selling lead. Bog, 3 to 4; in driving the 163 east on the south lode a large vein has been met with, where the agent thinks, as is generally the case, that he will find a good bunch of ore. Other parts of the mine unchanged. The weather is very severe, and somewhat interferes with surface operations.

Llanidloes (Lead), 3½ to 3¾; the bottom of the mine has further improved, and good ore is being raised and dressed. West Goginan, 2 to 2½; a good enquiry exists for these shares, it being thought that profits will be quickly made as soon as the machinery is set to work. The mine is looking well at all points.

Silver Mines have been without special feature. Richmond Consolidated, 7½ to 7¾. Cablegram received—"Week's run, \$38,000; ore still low in lead; sunk 60 ft. below the 600 in good ore." The season's make of bullion, \$1,468,000, and since February \$2,040,000. The refinery this season has produced gold and silver to the value of \$952,000, irrespective of the lead. As the new hoisting machinery has been available for the last three weeks, and the richly-lead ore at the lowest workings made accessible, no sufficient explanation has been afforded by the manager why he has not even yet succeeded in getting a sufficient quantity down to the furnaces to improve the returns, which he indicated several weeks since would take place immediately. The mine is two miles from the furnaces, and if the effect of the heavy snowstorm, announced in last week's cable, still prevented haulings, it would have been satisfactory to the shareholders to have been told the cause of these vexatious delays. No good smelting is possible without the requisite quantity of lead, and it is extremely mortifying to know that while there is abundance of this requisite in sight, that such unaccountable delay has occurred in utilising it, and that this week's run is again short, because the ore smelted has been "low in lead."

The manager's report is again very brief, but it is satisfactory to find that he has been able to recommence drifting from the 700. The new discovery in the back of the 600 is opened out to the extent of 50 ft. by 30 ft., with ends and sides still in ore; this looks promising towards making up the deficiency supposed to have been discovered in Prof. Price's estimate of reserves between the 500 and 600 levels. The pillar of low grade iron ore and limestone which appears to have cut out such a large portion of the reserve anticipated between the 500 and 600 levels, as defined at the time of Price's inspection, will probably have its bulk fully made up by the ore body now evidently coming in between the pillar and the main shaft. The announcement in this week's cable that the main lode is further proved below the 600 ft. level to the extent of "60 ft. in good ore," taken in conjunction with the dimensions given of the new workings in ore between the 500 and 600, indicate a large present addition to the reserves, with a prospect of a speedy increase.

We have been favoured with the following extract from a letter dated San Francisco, written by J. D. Pemberton, Esq., C.E., a shareholder in the Richmond Company, addressed to a relative in London, also a large shareholder:—

I saw two people recently from the Richmond Mine, a Mr. Morris and a nephew of Mr. Myers. Mr. Robert still remains at the mine. The accounts given of the new discovery are most encouraging—a regular Bonanza, of about 36,000 tons, being in sight, value about half a million sterling, and dear knows how much more behind. The new hauling works are, I believe, complete, and everything in first-rate running order. Mr. Myers, who is a very matter-of-fact man, and not at all given to exaggerate, thinks dividends will be declared from May next, and that the days the Richmond has seen are its worst. Mining stocks here are high now. The Virginia, which were 250 to 260 after the fire, are to-day 390; California, 51, are 70. Money here is much more abundant than it was, and, with every prospect of an abundant harvest, people are in excellent spirits here.

Eberhardt and Aurora, 8½ to 8¾; the ore milled during the last run of 20 days was 991 tons; assay value, 12,507, or 2½ 10s. per ton; bullion produced, 11,875, equal to 94 per cent.; ore on mill and mine dumps, 293 tons; expenses for the month, 6400; profit, 5475; the mill was closed down on Jan. 2. Mine continues to look well; 13 bars of bullion have been received, of the value of 3500; 23 bars of bullion have been received, value 6100. Chicago, 6 to 6½; the net profit in December was \$15,000, running two furnaces 22 days; the other furnaces resume on Jan. 10. Tecoma, 3 to 1; the depth of the incline is reported to be 110 ft., and that a large body of ore has been developed, assaying 60 ozs. silver, and 60 per cent. lead. Exchequer, 3 to 4; by the advice, appearing in another column, it will be seen that a large lode carrying quartz has been struck on the west side of the shaft, the dip of this lode, as well as the main lode easterly, consequently the shaft will cut it again at a lower depth. It has been suggested instead of its being merely a spur dipping towards its junction with the main lode it may in reality be the northern extension of the I.X.L., known as the Acacia, which is running parallel with the main Exchequer lode, known as the Buckeye. It is usual where junctions of this kind take place large deposits are usually found.

Foreign Quartz Mines have been generally firmer. St. John del Rey stock have advanced upon the week, and close 380 to 500; produce in December, 48,500 oits., 18,793; yield, 8-2 oits. per ton; water short. Argentine shares have been dealt in at 6½ to 7; on Monday the Archimedes sailed from Liverpool for Rosario direct, with an efficient staff, consisting of engineers, stonemasons, and miners, and also stores and materials. The vessel is due on Feb. 10; it will take about a month from that time to transport the men and materials up to the mines, and it is estimated that within 14 days after their arrival 24 heads of stamps will be in working order. All required at the mines is to place the reduction works in proper repair to ensure the treatment of 1200 to 1500 tons of mineral per month. Hitherto none of the virgin ore has been treated, which it is said will return 3 ozs. of gold per ton; calculating 1 oz. per ton, and the maximum of expenditure, the net result from an output of 1500 tons monthly, should be 3000, equal to 50 per cent. on the total capital; this can be multiplied as the stamping power is increased, the mineral laid open and immediately at command being practically unlimited. During the completion of the present workings the opening out of the mines will be energetically continued. Port Phillip, 3 to 4; yield in December was 6 dwts. 10 grs.; western reef, 6 dwts. 6 grs.; new eastern reef, 6 dwts. 12 grs.; profit, 760. Don Pedro, 6s. to 6s.; produce in December, 4300 oits.; deficiency of water continuing. Chontales, 3 to 4; Javali, 3 to 4; Frontino and Bolivia, 2½ to 2¾; Sierra Buttes, 1½ to 1¾.

The market for Hydraulic or Gold Washing Companies shares on the Stock Exchange has been well supported during the week. Those descriptions have been fairly dealt in, and there is an appearance of steadiness evinced, which looks well for the coming season. Blue Tent, 3½ to 4½; there is no change reported from the manager. He is washing on the Blue Lead and Enterprise claims, and will commence at the South Yuba soon as the necessary arrangements are made. The ditch is bringing in a steady supply of water to the mines, and the quantity is supplemented at present by water purchased from the company. The shares have been dealt in, and keep at about the figure of last quotations. Sweetland Creek, 2½ to 2¾; Mr. G. D. McLean reports that he has commenced another run with ample water. The last clean-up was a thorough one, and included the creek, &c., some parts of which were not taken into the previous accounts. The shares are very steady at closing prices, and we note many transactions in the shares during the week. Birdseye Creek, 2½ to 2¾; the agent does not report any particular change. Washing was continuing steadily, and a blast of 500 kegs of powder was to be fired about Christmas, which it was expected would give many days' washing on the best gravel. There has been

a very good business in the shares, which close firm at quotations. Cedar Creek, 3 to 4; C.J. Lullum reports matters progressing without change. The Yankee tunnel is being pushed on with all speed, and will be pushed forward to connect with the Badger shaft, now sinking. Shares quiet at quotations. Oregon pref., 4 to 4½; no further change has taken place here. Washing is going on at the Thoss claim, and good progress is being made in the various cuts and branches necessary for the due prosecution of the mines.

Penrithal, 8s. 9d. to 11s. 3d.; the lode in the engine-shaft is resuming its former value for tin, and the copper lode in the 56 east is valued at 10/ per fathom. Capt. Teague expresses his firm belief that a good course of copper ore will be met with.

Subjoined are the closing quotations—
Ashton, 1 to 1½; Bog, 6s. to 8s.; Carn Brea, 37 to 39; Devon Great Consols, 4 to 4½; Dolcoath, 40 to 41; East Caradon, 2½ to 3; East Lovell, 4½ to 5½; East Van, 13½ to 14½; Great Lixey, 16 to 16½; Great Wheel Vor, 2½ to 2¾; Hingston Down, 1½ to 1¾; Marke Valley, 3½ to 3¾; Pateley Bridge, 5½ to 6; Farys Mountain, 3½ to 4; Pennerley, 1½ to 1¾; Penrithal, 8s. to 10s.; Roman Gravel, 11½ to 12; Tankerville, 11 to 11½; Tinocroft, 19 to 21; Van, 38 to 40, ex div.; Van Consols, 2½ to 2¾; West Chiverton, 16½ to 17½; West Tankerville, 1 to 1½; Wheel Basset, 29 to 31; Wheel Grenville, 1½ to 2; Almada and Tiritio, 3½ to 4; Argentine, 6½ to 7; Birdseye Creek, 2½ to 2¾; Cape Copper, 38 to 39; Cedar Creek, 3½ to 4; Chontales, 3½ to 4; Colorado Terrible, 1½ to 2; Don Pedro, 6s. to 8s.; Eberhardt and Aurora, 8½ to 8¾; Emma, 1½ to 1¾; Exchequer, 3 to 4; Flagstaff, 3½ to 4; Frontino and Bolivia, 2½ to 2¾; Javali, 3½ to 4; Last Chance, 3½ to 4; New Quebrada, 4 to 4½; Richmond Consolidated, 7½ to 7¾; St. John del Rey, 380 to 390; Sierra Buttes, 1½ to 1¾; South Aurora, 3½ to 4; Sweetland Creek, 2½ to 2¾; Tecoma, 3 to 4; United Mexican, 3½ to 4; Blue Tent, 3½ to 4½; Oregon pref., 4 to 4½.

The MONTPELLIER, ISLE OF MAN, SILVER-LEAD MINING COMPANY, to the formation of which, with a capital of 20,000, in shares of 1/ each, reference was made in last week's Journal, have notified, with regard to the amount of purchase-money, inadvertently omitted in the prospectus, that the vendor agrees to accept for the property 1000/ in cash and 1000/ in fully-paid shares, the payments to extend over 12 months. This will leave 18,000/ working capital, which it is thought will be ample to thoroughly develop the mine. Capt. John Woolcock reports that he does not know of another such set in the island, and that it is one that will pay them a hundredfold for their outlay. He recommends it with confidence to any capitalist as a good investment, and stakes his 30 years' reputation as a practical miner upon it. He describes it as a very highly metalliferous mining set, which contains nearly 500 acres of ground. The mine is situated at the foot of Montpellier Glen, close to the Sulby river. At the bottom of the glen is an adit level, driven on the course of the lode 22 fms. So far as it has been driven there are well-defined walls, and some nice lumps of silver-lead ore have been found therein. Further up the glen, about 80 fms., the lode is seen at the surface. Here a small trial shaft has been sunk, 10 fms. deep, from which sinking some splendid samples of ore were taken, sufficient to prove that it is an ore-producing lode of rare excellence. Capt. Bowden, for 20 years manager of the Foxdale Mines, reports that the locality is all that can be desired for mining exploration, having the great advantage of driving deep adit levels on their course in the hill, thus proving their value with a light expense as they proceed. Their present operations consist of an adit level driving on one of these veins, commencing close to the bed of a mountain stream which penetrates the Montpellier Hill. This is a very encouraging point; the vein in the present forecast is large and well defined, and is composed chiefly of blue clay, with a little sulphur, and occasionally some small pieces of silver-lead ore. About 200 fms. from this point up the stream the vein is again laid open, which also shows good indication. He saw several pieces of lead ore extracted from it during his visit, thus proving it to be an ore-bearing vein, and one that is well worthy of a spirited trial. The veins are embedded in the blue killas rock of the country, which is congenial to the production of lead ore, and is also cheap for exploration. The report of Capt. Kitto is equally favourable. The prospectus will shortly be issued to the public.

FROM A LONDON BROKER'S CIRCULAR.

Excepting Egyptian and Turkish, foreign stocks call for little attention. A decidedly better feeling appears to exist with regard to Egyptians; it being generally anticipated that Mr. Cave's report will be favourable, the stock has been freely purchased, and shows a marked improvement in price. Turkish also were in strong demand in the early part of the week, on the announcement as to the payment of the coupons. Home railways, with a few exceptions, show an advance for the week. The Brighton and South-Eastern dividend, though good and considerably better than those of last year, caused some disappointment, as much as 8 per cent. being expected in some quarters on Brighton. The withdrawal of the scheme for the proposed new line to Brighton caused an appreciable rally in this latter stock. The miscellaneous market has been very quiet. Anglo-American Telegraph stock shows a slight fall for the week. The English funds are firm. The Bank rate remains at 5 per cent.—London, Friday morning. J. Y. WATSON, jun.

ROOKHOPE.—Though the operations are at present limited, pending the reconstitution of the company, the report received this week is very favourable. A rise in the 15 fm. level is worth 12 cwt. of lead ore per fathom, and this is most encouraging for the productive-ness of the lode in the upper sections. There is a rise in the 25, by six men, at 55s. per fathom, which is expected to be completed in eight days, and will lay open ground worth full 30 cwt. per fathom (20/ and east for stoping only 26s. per fathom. There are two stopes in back of 25, worth 8 cwt. and 20 cwt. per fathom. In the adit level there are four men stoping at 45s. per fathom, to be worth 25 cwt. (16/ per fathom. The mine is in the richest lead district in the kingdom, and with a small capital can be made to pay well.

GROGWINION (Lead).—The report and balance-sheet to be presented to the shareholders at the meeting on Tuesday next shows a net profit of 2377. 2s. 8d. for the half-year; 410 tons of ore have been sold at an average price of 142. 16s.; the reserves in sight are estimated to be worth 100,000. The monthly sales will be increased in a few weeks to 100 tons.

BRITISH LEAD MINES.—The second edition of Mr. Murchison's pamphlet has just appeared, and contains much additional important information. Mr. Murchison states that he has taken the opportunity to revise generally the information, and bring it up to the end of 1875 as far as he could, and to add particulars of some more mines. He also remarks, "A friendly critic has drawn attention to the permanency of many lead mines as a special feature in favour of this industry, in addition to the points noticed by me. Many cases might be given in support of this view, not the least remarkable being the London Lead Company, which has carried on mines in the North of England for two centuries, and has scarcely been a year without paying a dividend, besides accumulating a large reserve fund, while Mr. Beaumont's mines, in the same district, have been at work nearly 300 years, and have paid some millions of profits, still continuing very rich and profitable. The Snailbeach Mine, in Shropshire, has also made large returns and profits for nearly 100 years past, and various other lead mines in Wales, Yorkshire, and elsewhere have done the same in different degrees for 50 years and upwards." Mr. Murchison states that the dividends paid by the public lead mining companies in 1875 amounted to 112,500/., against only 82,811/ in 1874; and since the issue of his first edition, about a month ago, the aggregate market value of the public dividend-paying lead mines has increased from 1,489,953/ to 1,725,785/. The price of lead remains firm, with an upward tendency, and Mr. Murchison says it is likely to continue so, in a great measure owing to the additional impetus which is given to the demand through the large extension of building operations, caused by the great public improvements in the metropolis and the large provincial towns, which will be considerably intensified by the effects of the new Artizans' Dwellings Bill. Mr. Murchison concludes his new preface thus, "The New Year opens with a very encouraging prospect for British lead mining, and those who take the earliest advantage of these views will probably benefit the most. There are some important investments to be made now, which if promptly entered into, and carried out with spirit, will, in all probability, yield large profits in a short time to those who may be interested in them."

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This day is published, price 1s. 6d.,

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A SECOND EDITION of his Pamphlet on BRITISH LEAD MINES, together with the following MAPS, showing the position of the principal LEAD MINES, &c., &c., specially prepared by Mr. MURCHISON. The whole revised and added to.

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ON FIRST EDITION.

"After some very sensible remarks, and some hints as to the points to consider in forming an opinion as to the merits of a mine, Mr. Murchison goes thoroughly, and in a most able manner, into the object of his pamphlet. . . . We are obliged to defer till next week going into the numerous valuable facts and figures which are so prominent in every page of Mr. Murchison's pamphlet; but we must at once congratulate him on a production which is calculated to do much good to the mining interest, and to be a great benefit to investors."—*Mining Journal*.

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"Mr. J. H. Murchison, F.R.G.S., has just issued a neat little pamphlet on the British lead mines, illustrated by admirably executed maps of the chief lead mining districts of the kingdom. Mr. Murchison has a very high opinion of the value of that important item in our national industry, lead mining; and in the work before us he fully justifies that opinion. . . . and we have great pleasure in recommending his treatise, which contains much statistical information, to the notice of our readers."—*Morning Post*.

"Mr. Murchison, of Austinfriars, has lately published a pamphlet on British Lead Mines, which shows that this department of British industry is in a satisfactory state."—*Globe*.

"Few persons are more competent to compile such a work than Mr. Murchison, and it will be found a handy book of reference by all investors. . . . We recommend these who are said at present to have a superabundance of money, for which they cannot find good investments, to read and carefully consider Mr. Murchison's pamphlet."—*Money*.

"He (Mr. M.) shows that lead mining is quicker, safer, and less expensive than any other, and that the price of lead is generally steadier than that of other metals. . . . A great deal of valuable and useful information will be found in Mr. Murchison's pamphlet, which is embellished with three well-executed maps of the principal lead mining districts."—*Financial*.

"Under the title of 'British Lead Mines,' a pamphlet has been published by Mr. J. H. Murchison, F.R.G.S., of 8, Austinfriars, with the object of showing that the operations in British lead mines have in many instances led to very profitable results."—*Standard*.

"A pamphlet well worthy of consideration. . . . In these times of general depression it is satisfactory to find an important British interest in a prosperous state, and we invite capitalists to look into this means of investment."—*Money Market Review*.

"Mr. Murchison publishes in a concise form particulars of the past history and present position of some of the principal British lead mines. . . . A chapter on public lead mining companies, their aggregate capital, dividends, and market value, will not be the least recommendation to the popularity of this production."—*Monetary Gazette*.

"This is a valuable book of reference, dealing in a summarised form with a large mass of statistical information affecting the mining interests of England. . . . We seldom see so much practically useful information compressed into the same space."—*Irish Times*.

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"An interesting pamphlet, with carefully drawn maps, of the lead mining districts of England and Wales: . . . but apart from its special value in that direction, the work is useful. . . . The pamphlet must be of the greatest value as affording plain and reliable data to guide them (those interested in this industry) in their speculations."—*Preston Guardian*.

"Valuable and interesting information is given relating to British lead mines."—*Portsmouth Times*.

"The pamphlet, which contains several excellent maps, should be in the hands of every mining investor."—*Cheltenham Express*.

"Mr. Murchison is an authority on the subject of the value and productiveness of our British Lead Mines, he having made that department of metallurgy his special study. His opinions, therefore, deserve the careful consideration of intending investors in this class of mines. Mr. Murchison, we see, brings forward a very considerable array of facts and figures to support his opinion, which is strongly in favour of British lead mines as an investment for British capital. It would certainly be better for English savings to be spent in developing English industry rather than to be sent (as they often are) abroad, to be lost in dangerous foreign speculations."—*Southampton Observer*.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be kept on receipt; it then forms an accumulating useful work of reference.

NEWPORT ABERCORN STEAM COAL COMPANY.—Will any reader kindly inform me if the Charcoal Vein has yet been uncovered at the Newport Abercorn Steam Coal Company's pits?—H. S.

MANUFACTURE OF COKE.—Can any correspondent inform me whether Messrs. McLachlan, Stone, and Bayley, of America, whose invention was noticed in the Journal a few weeks back, have any agents in England, or is their patent being used by any firm in England?—J. C. Curd.

PUBLIC SALES OF ORES.—"F. D." (Chudleigh).—There is no public sale for ores in London. Ticketings for the sale of copper ore are held periodically at various towns in Cornwall and at Swansea. Tin is usually tendered for, the tenders being sent in to the sellers. The rarer minerals sold to London dealers are purchased upon samples at certain predetermined rates for given quantities, buyers and sellers agreeing to accept the assay certificate of recognised trade analysts practising in London. The two leading analysts for this class of work are Mr. G. H. Osgood, of 22, Mincing-lane, and Dr. B. H. Paul, of 106, Peachurch street. The charge is a mere trifle for the assay of each sample.

PENETRATING NOXIOUS GASES.—"E. F." (Camden Town).—The acrophore o Denayrouze will afford perfect protection to persons entering noxious gases, and it is surprising that it has not been more largely introduced at collieries, as if it were constantly kept in readiness no doubt many lives might be saved after explosions. It must, however, be borne in mind that the difficulty which the exploring parties have to contend with in reaching the men left in a pit after an explosion is often not so much want of air, which can usually be carried on pretty quickly, but absolute obstructions from falls and the like.

CHANNEL FERRY.—"F. M." (Paris).—Some experiments have been made with a model of Mr. Ezeron's ferry upon a small lake to the north of London, but they are understood not to have been successful, owing to some carelessness in the construction of the model. The principle appears to be good, and if the inventor provides a good seaway between the floatation tubes (cigars) and the platform above them, upon which the trains are to be carried, the structure ought, theoretically speaking, to ride almost without motion. There would be little fear of her "jumping like an empty barrel" as "F. M." supposes.

SHAFT SINKING BY MACHINERY.—"N." (Ripon).—The best machinery to adopt will depend in a great measure upon the nature of the ground to be sunk through. If, as you state, the ground would cost 20s. you would, no doubt, do well to adopt the diamond drill, though the system of working you suggest would scarcely pay. The American system would necessitate a large preliminary expenditure, as no levels could be put out until the whole 100 fms. were sunk. A shaft 14 ft. by 10 ft., sunk as you propose, would require at least 48 holes 3 inches diameter, and a central hole somewhat larger—say, 5,000 fms. of boring in all—before you would commence the actual sinking; in the meantime nothing could be done at the 15, 30, 45, 60, 75, and 90 fm. levels proposed. It would probably be preferable and more economic to get down a 6 ft. by 5 ft. shaft 20 fms. with the drill, then enlarge it to 14 ft. by 10 ft. by hand labour. The 15 fm. levels could then be started, and the sinking of an additional 15 fms. of 6 ft. by 5 ft. with the drill gone on with and enlarged as before. The 30 fathom levels would be put out, and the sinking continued as before. The cost of a bore hole increases with its depth, but by this method 120 ft. would be the depth of the deepest hole, and after the first 20 fms. sinking all holes would be made at the minimum rate—that for depths under 100 ft.

DIVIDENDS FOR 1875.—"W. T." (Glasgow).—The particulars asked for are published in another column of this day's Journal, a table supplying them having been prepared with much care by Messrs. Pyne and Ashmead. The lead mines have given the best results, but, considering the very depressed state of business generally, there is really little to complain of with regard to any class of mines. The prospects of the coming year are decidedly favourable.

Received.—"C. H." (Birmingham).—"Enquirer" (Pennerley): The meeting is due in May—"M. P."—"Shareholder" (Wheat Unity).—"S. L."—"M. E."—"J. B." (Llanidloes).—"S. B."—"G. F. H."—"M. H. R."—"Shareholder" (Wheat Grenville).—"W. T." (Ballydeobog).—"J. G. C." (Bastin).—"S. L."—"Shareholder" (New Consols).—"Constant Reader" (Cork): Next week—"H. H." Letter forwarded—"H. F." (Inquirer) (Chudleigh) will write to Messrs. Robertson, Cook, and Co., Imperial Works, Bromley-by-Bow, he can obtain the information he requires—"Shareholder" (Wheat Crebore): The meeting will be held next week.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JANUARY 15, 1876.

HOPEFUL SIGNS IN THE COAL AND IRON TRADES.

At a time when thoughtful men are distressed at the obstructiveness of an important section of our handicraftsmen, as manifested in connection with the Erith strike, it is gratifying to set forth that the two classes of operatives who are usually charged with the most readiness to disagree with their employers are seen doing most to prevent a divergence which tends to the advantage of neither one nor the other, but rather to the destruction of both. "Thank you for nothing" would, perhaps, be an apt phrase, as expressive of the truth underlying the passing reasonableness of certain of our colliers and ironworkers; but it is, nevertheless, satisfactory that these men should now be prepared to submit to the superior force of argument rather than to the destructive dogmatism of a strike, the settlement of questions intimately affecting their daily earnings. It need not be recapitulated that the colliers of Durham and Northumberland, the neighbouring ironstone-workers, and the finished ironworkers of the North of England, are all now amicably debating with their masters before third parties what shall be the rate of wages which they shall receive after about the middle of this month. There are the usual utterances of preliminary discontent at the outcome of similar proceedings in South Wales, but there is little valid reason to doubt that the colliers in the Southern Principality will accept the sliding-scale to which their representatives have agreed on their behalf. Last week the whole iron trade of Central England was seriously agitated with a foreboding that very different action would be taken by the colliers in South Staffordshire and East Worcestershire, with the result that the iron trade thereabouts, which sadly needs not that it should have to carry heavier burdens, but that its existing burdens should be greatly lightened, would be crushed to the earth beneath the load inseparable from a further advance in the price of coal, necessitated by the determination of the colliers to have higher wages. That danger, we are happy to say, is overpassed. Doubtless preliminary action had been taken by not a few of the miners in South Staffordshire to get an advance under the threat of a strike. Notices for an increase of wages were given at many collieries, notwithstanding that the men were really bound by the agreement come to before the Mayor of Birmingham, which made their wages dependent upon the price of coal declared by the colliery owners, and by the Earl of Dudley in particular. The men, however, seemed to be under the impression that this arrangement did not prevent them from moving with a view to urge their masters to advance prices, and so bring about higher wages. That in their endeavour to get more money they were not anxious to throw over the sliding-scale is conclusive, by the fact that representatives of the leading localities in South Staffordshire and East Worcestershire were delegated to meet the masters, and to discuss with them the notices which the men had handed in. After a business fashion, application was duly made to the Coalmasters' Association for the convening of a meeting at which the deputation might be received. Responding, the committee of employers summoned a meeting for Tuesday last at Dudley. There both sides discussed the position frankly and fully. The men were shown how suicidal to the interests of both would be the declaration of an advance at this juncture, and we are happy to add that the colliers' representatives were amenable to reason. They did not press the notices, but, on the contrary, consented that work should be continued for the present on current terms.

The ironmasters have now been able to hold their quarterly meetings without the dread overhanging them that their workpeople will impose obstacles which shall drive the trade out of the country. As to South Staffordshire, wages as they now stand are altogether too high, combined as they are with the eight-hours system. For ourselves we cannot see how the iron trade of that part of the kingdom can hold its own and pay either to its miners or its ironworkers the rate of remuneration which both alike are now receiving.

ing. The last advance to the colliers necessitated, our correspondence has shown, a rise of 2s. a ton in best coal. Yet this impost the ironmasters had to bear without being in any way able to recoup themselves by greater prices for their product. As to the ironworkers in Central England the existing scale is 6d. per ton above the scale now paid to the men in the North of England, and 2s. a ton above that for which the Northern masters have given their men notice. When the time comes for ironworkers in South Staffordshire to receive notices which must certainly be served upon them so soon as the new scale has been fixed in Middleborough, it is to be hoped that they will not rashly decline to settle the question, if not in precisely the same way as that in which their brothers of the North are coming to terms with their masters, then somewhat after the smooth manner in which, through a Board of Conciliation, they were working up to a recent date. It is impossible that so great a difference in the two scales as will certainly subsist when the Northern arbitration is finished can continue in the two districts.

We claim for the coal and iron masters a disposition to remove all reasonable objection from the minds of their men. It would, for instance, be perfectly competent for the ironmasters in the North of England, now that an examination of their books has shown that their average prices per ton in the past quarter have been a trifle over 7l. 10s. only, to tell their workpeople that they must accept the 7s. 6d. a ton, upon the principle that pounds per ton in price should still represent shillings per ton for puddling. But, notwithstanding the poverty to which their men have been reduced by the want of work, that has of late so sadly prevailed, the Cleveland masters meet their men and reason out the question in all its details, whereby they prove themselves willing to do by their men in adversities the same as they have done by them in prosperous times. Seeing that 9s. 6d. a ton for puddling in Central England is a proportion so much in excess of what is the average price of the bar-iron made and consumed in that part of the kingdom, it would be quite reasonable for the ironmasters there, having ascertained what their average is, to declare at what rates alone they can continue to employ their men at a time when not only are the existing prices unproductive of profit in other than exceptional instances, but when, likewise, the market is demanding ease. But the ironmasters in Central England, like those in the North, are desirous of settling the future scale amicably. Their experience has caused them to prefer conciliation to arbitration as the method to be pursued; and through their secretary they are now drawing up a scheme by which at once union and non-union men may be able to unite with their masters in saying upon what terms they will continue to maintain their existing industrial relationship. It will not be easy to lay down a basis broad enough for a settlement when workmen, who find it so difficult to agree, have to be consulted. Nevertheless, we wish the ironmasters of South Staffordshire every success in their peaceful endeavour. If the issue should not be what they and what we all desire, the fault will not be with them. Meanwhile we hope for the best, and will bracket Central England with the North in respect both of the iron and coal industries as presenting features alike cheering and creditable to all concerned in this very important matter of wages settlements.

SCOTCH AND CLEVELAND PIG-IRON.

It is a remarkable fact that, in spite of all the difficulties and obstacles against which the iron trade of Great Britain had to contend last year, 1875 was a period of progress as regards the production of pig-iron in both Cleveland and the West of Scotland. In the last-mentioned group pig was made last year to the very considerable extent of 1,050,000 tons, against 806,000 tons in 1874, showing an increase last year of no less than 244,000 tons. This was partly due to the fact that 1874 was a dull year in the Scotch pig-iron trade, but it was also attributable, in some measure, to the satisfactory steadiness with which working operations were carried on in 1875, the Scotch ironworkers seeing, apparently, that the general course of trade would not justify any sustained upward movement in wages. It will not do, however, to place too much confidence in this apparently satisfactory aspect of affairs, as anything like a substantial improvement in prices would, probably, at once have the effect of bringing once more into bold relief the ancient antagonism between capital and labour. At the same time, we may fairly congratulate not only Scotch ironmasters, but also Scotch ironworkers, upon the prudence and moderation which the latter have exhibited, although some of their leaders exhibited a disposition to disturb the situation at one period in the year. The Scotch are better educated than the English, upon the whole, and the sensible course pursued by Scotch ironworkers last year would appear to show that they are rather more intelligent and far-seeing, and more in the habit of thinking and acting for themselves, than their English brethren. Of course, it would have been useless to have produced more Scotch pig-iron during last year if the consumption had not also increased. On this point the experience of last year can scarcely be said to have been discouraging. Makers' stocks certainly increased in 1875 to the far from unimportant extent of 74,000 tons; but, on the other hand, the home consumption was 43,000 tons larger in 1875 than in 1874, while the exports also expanded last year to the extent of 103,000 tons. With regard to the exports, the largest increase was established under the head of the foreign shipments, no very great progress having taken place in the deliveries coastwise and by railway. The receipts of English pig in Scotland increased last year to the extent of about 20,000 tons as compared with 1874.

We turn now to Cleveland. The progress established last year in the production of pig in that wonderful group was much less marked, the local labour market having been disturbed, while the production of 1874 was also very considerable. Not even such orators as Mr. MACDONALD and Mr. BURT have been able, however, to altogether arrest the production of pig in Cleveland; it has marched on and on, in spite of anything and everything. In 1863, Cleveland made 1,233,418 tons of pig; in 1869, 1,459,508 tons; in 1870, 1,695,377 tons; in 1871, 1,884,239 tons; in 1872, 1,968,972 tons; in 1873, 1,999,491 tons; in 1874, 2,001,233 tons; and in 1875, 2,047,763 tons. It will be seen, however, that the rate of increase has slackened since strife and discord became the order of the day in the north-eastern labour market. It needs no literary art to establish the fact that 1869, 1870, and 1871 were years of extraordinary—indeed, almost vertiginous—progress in the Cleveland iron trade. Comparing 1871 with 1863, we see an advance of at least 50 per cent. in the production of pig in Cleveland; while comparing 1875 with 1871, the further progress realised has been less than 10 per cent. Had Cleveland maintained during the last four years its previous wonderful rate of progress the production of 1875 would have been about 2,600,000 tons instead of 2,047,000 tons. Nevertheless, it is not a little remarkable that the extraordinary agitations which have prevailed in the labour market since 1871 have failed to absolutely arrest the progress of Cleveland metallurgical industry. Not only was the production of pig further increased in Cleveland last year, but makers' stocks also declined during 1875. Thus at the close of December, 1874, these stocks stood at 89,737 tons, while at the close of December, 1875, they had receded to 74,258 tons. Altogether, the facts which we have been summarising are not a little remarkable. The productive power of Cleveland is now immense, and the impetus acquired appears to be practically irresistible.

PROSECUTIONS UNDER THE MINES REGULATION ACT, 1872.
STOKES v. MELLOR.—This case was first brought before the Justices on Nov. 19, 1874, and was instituted by Mr. Thomas Evans, Government Inspector of Mines, against the defendant, Mr. J. Randolph Mellor, as agent of the Hockley Hall Colliery, for offences under the above Act. At that hearing the Justices were of opinion that Mr. Mellor was not an agent within the meaning of the Act, and decided not to convict; but on the application of Mr. Dewes (of the firm of Messrs. Dewes, Son, and Wilks, Coventry) granted a case for the opinion of the Court of Queen's Bench. Upon this case the latter Court decided that the Justices were wrong (Justices Blackburn, Mellor, and Quain), and remitted the case for them to adjudicate upon. The Judges said they could not imagine what made the magistrates find otherwise than that Mr. Mellor was an agent under the Mines Act. The offences in question were as follows:—Neglect to provide

proper ventilation in mine, and neglect to report condition of mine. Mr. Dewes again appeared before the county Justices at the Tamworth Town Hall, to support the informations, and Messrs. Argyle and Sons for defendant, who now pleaded guilty to both offences. The maximum fine imposed by the Act is 20l. for each offence, but as the offence in question had been committed so long ago, and the matter had become a disputed point of law, and was not now pressed by the prosecution, except upon its legal merits, the Justices imposed a mitigated fine of 40s. only in each case.

THE TAPTON COLLIERIES.—NEGLECT TO VENTILATE.—It appears that although about 375 men are employed at the Locksford pit of the Tipton Collieries, no more than 9000 ft. of air, and frequently only 6000 ft. per minute is supplied to ventilate it; whilst the nature of the mine requires at least 30,000 ft. to render the pit safe. Philemon Hicks, the certificated manager, has been fined 10l. and costs at the Chesterfield Police Court, for endangering the lives of the workmen, and actually stood in cross-examination that "the first object was to make the pit a commercial success, and then look after the ventilation." So that the lives of 375 men are to be jeopardised to secure for the certificated manager and managing director of the company the reputation of managing economically. It appears that the Government Inspector, Mr. T. Evans, had an interview with Mr. Hicks, the managing director of the company, about 12 months ago, when the latter acknowledged that the mine was not so safe as it might be, and promised to put down a ventilating fan, but the matter had been postponed from time to time, and had never been done. It is but just to the certificated manager to state that he has succeeded in increasing the ventilation from 6000 ft. for 300 men to 9000 ft. for 375 men, so that he has, perhaps, done all that is practicable with the appliances at his command. The record of this case should be carefully kept, for should it be proved upon the occurrence of accidents hereafter that the certificated manager has used his best efforts and ability, the question might be raised whether the managing director could not be charged with manslaughter, and if convicted, punished with the highest penalty which the law allows for that crime, whilst the other members of the company should be made to pay full compensation for such unnecessary sacrifice of life. It is to be hoped that the Tipton Collieries will be made safe without attaining a rank beside the Oaks, the Ferndale, and others of equally evil reputation.

THE RECENT EXPLOSION AT SHEFFIELD.—The secretary of Young's Paraffin Light and Mineral Oil Company (Limited) writes:—"My attention has been directed to a paragraph attributing to paraffin oil an explosion at Sheffield, whereby a boy was much injured. I have enquired into the circumstances, and beg to acquaint you that the accident was caused by a lighted match being thrown into a petroleum spirit cask. Had it been inserted into paraffin oil it would simply have been extinguished."

COAL AND IRON IN THE UNITED STATES.—In the course of the year ending Sept. 30, 1875, the Boston and Providence Railroad Company laid 11 miles of its track with steel rails. The New York, Providence, and Boston Railroad Company also laid down 1016 tons of Bessemer steel rails in the year ending Aug. 31, 1875; the company has charged the difference in the value of iron and steel rails, estimated at \$30 per ton, to construction account. The production of coal in Pennsylvania to Dec. 11 last year amounted to 19,757,758 tons of anthracite and 3,787,029 tons of bituminous, making an aggregate of 23,544,787 tons, as compared with 23,167,525 tons in the corresponding period of 1874. An increase of 377,262 tons was thus established in the production to Dec. 11 last year. Anthracite coal figured in this increase for 106,135 tons, and bituminous for 271,127 tons. English rails in bond are quoted at New York at \$35 to \$36 per ton gold; American rails are quoted at the works at \$15 to \$18 per ton currency.

MECHANICAL STOKING.—An experiment in mechanical stoking is being tried on board the Camel, tug, at Portsmouth, by the Factory Department. Should the machine fulfil the promises of the inventor, it will secure an important saving in labour and fuel, besides entailing greater uniformity of combustion in the furnaces.

KRUPP'S "SILICATE COTTON."—Messrs. Cresswell and Co., of Leadenhall street, write with reference to this subject, referred to in the *Mining Journal* a few weeks back. They say they have only just learnt from Mr. Friedrich Krupp that, although the "silicate cotton" sold by them is manufactured at his ironworks on the Upper Rhine, near Coblenz, it was not exactly his invention. Although this fact is of comparatively small importance, Messrs. Cresswell regret that circumstances over which they have no control should have induced the belief that such was the case, and that they are only at the eleventh hour made aware of the actual facts. All "silicate cotton" supplied by them for the purpose of covering steam-boilers and pipes, safes, ice-houses, fire-proof rooms, &c., and, in short, for all purposes in which the letting in or out of either heat or cold is the object, is produced at Friedrich Krupp's Works, as above mentioned, and is protected by their own trade mark—a Phoenix on a star, with mining tools crossed.

TRAMWAY LOCOMOTIVE.—The experimental trial on Saturday of the smokeless and noiseless locomotive for tramway-cars, invented by Mr. John Downes, of the Red Lion Hotel, Handsworth, near Birmingham, was decidedly successful. It was attached to an ordinary tramway-car, and performed many journeys between the Red Lion and the New Inn, taking each time a load of over 50 passengers. It proved both noiseless and smokeless, but there was an escape of white steam, which the inventor feels confident he will get rid of. High spirited horses were not the least startled by the machine. The inventor may fairly be congratulated on his success.

PORT OF SWANSEA.—This port, once the principal seat of the copper trade of the kingdom, has suffered very considerably during the past year in consequence of the general stagnation of the chief staple trades of the district. From various causes the copper trade may be said to have almost entirely departed from the district; once flourishing copper smelting works have been converted into other manufactures, and not one cargo of Chilean or other ores is now imported where ten were some few years ago. Notwithstanding this serious decline of the copper trade, however, the trade of the port and district, taken as a whole, is in a healthy condition, whilst the future is still more hopefully regarded. Her principal merchants and the colliery proprietors of the district, who are so deeply interested in the advancement of the interests of the port and the development of the large and valuable mineral resources, are urging the various representative bodies to take action, and to carry out further dock extension, and other harbour improvements which are so imperatively demanded. And it is satisfactory to be able to state that both the Harbour Trustees and the Corporation cheerfully respond to these requirements; and not only so, but that the Great Western and the Midland Railway Companies, two of the most powerful, and at the same time far-seeing, companies in the kingdom, are willing to help the local authorities in the most substantial pecuniary manner. The Harbour Trustees some short time since obtained the necessary parliamentary sanction to construct another dock in St. Fabian's Bay, the estimated cost being some 300,000l. These docks are at the terminus of both the Great Western and the Midland systems, and whilst they would afford to the Great Western great facilities for the direct and more expeditious shipment of coal from the Merthyr and Aberdare Valleys, and all districts below the Ely, it would, on the other hand, give the Midland the opportunity of opening up a large import trade of timber, grain, &c., rather than in the port of Gloucester, where intricate approach is difficult and dangerous to navigate. Such being the case, the Great Western Company have just agreed to guarantee a rental in the proposed new docks of 5000l. per annum, and the Midland Company of 30,000l., which sums capitalise represent 200,000l., or two-thirds of the whole amount required. The Corporation of the town, who are even more interested in the prosperity of the harbour than the railway companies, also propose to guarantee the Harbour Trustees a rental of 4000l. per annum more, so that the whole of the required capital may be said to be subscribed. But these deep water docks will necessarily demand further important and expensive works on the part of the Harbour Trust, and these, too, are about being commenced. The favourable geographical position of the Port of Swansea is admitted and recognised by all, and hitherto greater depth of water has been the chief impediment in the way of development. The Harbour Trust are now about extending the piers another 1000 ft., and dredging the entrance channel, which will give some 3 ft. greater depth of water, and will allow the entrance of those large classed collier steamers and heavy tonnage vessels, which now go elsewhere. It is well known that the more western portion of Glamorgan is exceedingly rich in minerals, which is scarcely yet tapped, but with greater facilities would be rapidly developed, and would give an impetus to trade which it has not received for many years. The construction of the new docks in Fabian's Bay is the principal topic of discussion at present in all commercial circles, and meetings of the Chamber of Commerce, and other bodies are being held in support of the scheme. The project has the hearty support of Mr. H. H. Vivian, M.P., Mr. Evan M. Richards, M.P., Mr. James Livingston (Mayor of Swansea), Cory, Yeo, and Co., Mr. S. Beeson, and

most of her leading merchants; and such being the case there can be little doubt of the success of the scheme, and also the wisdom and policy of the step adopted by the Great Western and Midland Companies in lending their powerful assistance in carrying out a measure which is calculated to so vastly develope the whole mineral resources and the manufacturing interests of the districts.

REPORT FROM CORNWALL.

Jan. 13.—It would be better if this week, like last, there were no news than such as we have to tell. Though there has been no officially announced decrease in the standard there has been a fall of 2s., and tin now stands as low as it ever stood within the memory of man in modern times. In fact, when we take into account also the extra present cost of production, it never stood so low as now. Can there be a lower deep? It hardly seems possible, yet who can say. If there is not an improvement one thing is certain—there are not half-a-dozen tin mines that can continue paying dividends. Dolcoath, Tincroft, and East Pool appear capable of bearing up under any adversity, but what of the great majority? Many, doubtless, can and will struggle on, but many must succumb unless relief be speedy and substantial. What are the prospects that this relief will be realised? Not altogether hopeless certainly. So far as we can make out the main cause of the depression (apart from the effects of speculation and the general dullness of trade) is the manner in which the Indian tin has been thrown upon the market. The imports of Australian tin last year did not increase more than sufficient to make up for the falling off in the home production. On the other hand, the quantity of Straits tin thrown upon the market was unusually large, so large as to have suggested the idea that the Dutchmen must have been alarmed at the prospects from Queensland, and have hastened to realise. If this is the case, since apart from general disturbing causes the consumption of tin is steadily increasing, we may be long long for some improvement. If not, "hope will have to be long deferred." At the East Pool meeting the belief was expressed that it would be better for things to remain as they are for some time, as there would then be more chance of a permanent improvement, than to have any mere flashes in the pan, ephemeral fluctuations that leave us enduring marks behind. And, no doubt, this is so. At any rate, all that our tin miners can do is to work on with as much hope as they can, and with the utmost economy consistent with proper development. It is no economy merely to limit expenditure to the remunerative portions of a "bal," but the contrary. And whatever the future may have in store—and we do not for a moment believe that Cornwall is played out—there can be no doubt that this is the best policy. But what about the policy of tin stocking, to which it is said that Dolcoath is committed somewhat deeply, though not so deeply as Wheal Owles. It will take a very decent rise to compensate for holding tin month after month, and the consequent bankers' charges on the money borrowed.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Jan. 13.—The first of the quarterly meetings of the South Staffordshire iron trade was held in Wolverhampton yesterday, and was very numerously and influentially attended. The timely and fortunate adjustment of the wages dispute in the coal trade, and the sensible decision of the coalowners to make no change for the present in the course of prices, had the effect of imparting a settled tone to the iron trade, and although the aggregate transactions did not present a good average for the occasion, some tolerable specifications changed hands, especially for the better classes of pig-iron. North Country pigs, although without any declared change, showed a degree more firmness, and the Shropshire houses asked slightly increased rates for iron wire, rods, and other specialties of the district. The manufacturers of galvanised roofing sheets, who up to Christmas experienced an excellent demand, now find a slight falling off in the orders coming to hand. The general prospects of business, owing to the new quarter, are not so satisfactory as could be desired, the indications of the usual spring trade with the United States being specially discouraging. Prices remain on the basis of 10s. for branded bars as regards finished iron, and on the basis of 4s. to 4s. 15s. for best native all-mine in the pig-iron department. Lillieshall cold-air pig for foundry purposes remains at 6s. per ton.

To-day's meeting of the iron and coal trades, in the Birmingham Town Hall, was very numerously and influentially attended, merchants and manufacturers from all parts of the kingdom being included in a company which filled the great hall to overflowing. The transactions were more numerous than at Wolverhampton yesterday, and some very fair orders for pig-iron changed hands; but the total business did not represent a good average for the principal quarter-day. Prices ruled about the same as at Wolverhampton yesterday, and the general tone of business was steadier than we have been able to report for some little time past. Among the exhibits we noticed the patent safety tapers of Mr. F. H. Lloyd, which by an improved and ingenious construction renders risk of explosion and leakage of water into the furnace almost impossible. The Royal Greek Ironworks Company, of Wallsend, near Newcastle, showed specimens of a new brand of pig-iron of remarkable purity and strength. The brand used in its natural state for castings, or after its transformation into malleable iron or steel, has proved a great success, and it competes successfully with noted home brands even of cold-air make, as well as with Swedish or Styrian pig-iron. The pig-iron is produced by the smelting of a special foreign ore, without mixture of any other materials. The samples shown attracted considerable attention.

The following were included in the transactions to-day on the Birmingham Stock Exchange:—Sandwell Park Colliery, 28 buyers; Perry Hall Colliery, 1 prem.; Hamstead Colliery, 14 prem., buyers; Pelsall Coal and Iron, 5 dis.; Patent Shaft and Axle, 5 prem.; Cannock and Huntington Colliery, 24 prem.; John Bagnall and Sons, 54; Chillington Iron, 5.

The North Staffordshire coal and iron trades do not present much change since our last report, the general tone of business being flat; but the usual spring orders on account of shipping trade will, it is hoped, give a turn to business during the next few weeks. Coal is in plentiful supply at about late rates.

TRADE OF THE TYNE AND WEAR.

Jan. 13.—The Coal and Iron Trades are, on the whole, very quiet, and little spirit may be expected in business until the settlement of the disputes about the wages question. There is a fair demand for house and gas coals, but the demand is very limited for all other kinds. Manufacturing coal continues plentiful and very low in price. The arbitration in the case of the Northumberland miners was expected to be settled during the present week, but the final meeting has been postponed, owing to the circumstance that the accountants have not completed the work assigned to them. The arbitration in the Durham case is expected to be commenced in Newcastle on Tuesday. A large number of accountants have been employed some time in preparing the necessary accounts.

Some of the pits recently laid off in the Aekland district are to be started again shortly, as it is expected that the trade will improve very soon. It is understood that sinking will be commenced again soon at the new winning near Whitburn. Pumping power on a large scale has been provided capable of lifting upwards of 5000 gallons of water per minute. The lower seams below the well-known Hutton seam have proved productive in some parts of East Durham; as these seams have only recently been proved in the east side of the county it is uncertain what the extent of good workable coal may be in them, but so far as explorations have gone the results, on the whole, encouraging. At Heworth Colliery, the Hutton seam having been nearly exhausted the Beaumont seam has been found below, and it is now worked extensively. The top part of this seam is an excellent house coal. The same seam has been got at Redheugh, on the west side of Gateshead, and it is now worked and sold as house coal. It has also been worked at Pelton Fell for some time, and as the places mentioned are some miles distant from each other it appears to be only fair to anticipate that several square miles of this coal will ultimately be found in the east district of the county, and it will become available for sale as house coal when the

Hutton seam and other house coals are exhausted, which will occur at no very distant day.

The Arbitration Board in connection with the iron trade held a meeting on Saturday to decide the wages question. The masters want a reduction of 15 per cent. Mr. Williams acts for the employers and Mr. Mundella for the men. The result of this arbitration will have an important effect on the iron trade of the country. The make of pig-iron in this district has been larger during the past year than in any previous year. Although the local trade has been so slack the demand has been good for shipment foreign and coastwise. The make of pig-iron in the district exceeds one-third of the total make in the United Kingdom. On Dec. 31 there were 116 furnaces in blast.

At the quarterly meeting at Middlesbrough there was not so large an attendance as usual on such occasions. A few strangers were, however, noticed from other iron districts. There was only one stand for exhibition of water-gauges, by Messrs. Crossley and Co., of Middlesbrough. The general feeling of the market was rather more favourable, an enquiry being directed for pig-iron of the kinds, which induced makers to be firmer in their quotations, some of them asking 5s. for No. 3; sales, however, unless for exceptional brands, were not made at above 53s. or 55s., and some of the merchants were standing at 52s. 6d. Forge iron averaged about 51s. net cash. There is good foreign and coastwise demand kept up for pig metal, which, combined with the low stock in makers' hands, as revealed by the last returns, has the effect of making prices firmer. There will be more furnaces put in blast if prices go higher, as many are available. The manufacture of iron trade evinces some signs of improvement, though not so far in the rail department, which keeps low, more men being laid off lately. There are very few enquiries. There is more demand for shipbuilding iron, chiefly plates, and the mills are much better employed than was the case a short time back. Plates are 71. 12s. 6d. to 71. 15s.; rails, 61. 12s. 6d. to 61. 15s.; common bars, 71. 2s. 6d. The result of the wages arbitration in the finished iron trade is expected to be known next week. The coal trade of Durham is rather stagnant. There has not been so good a request for any class of coals. Coke keeps pretty much about the same prices for furnace sorts, being 11s. to 12s. at the ovens.

REPORT FROM LANCASHIRE AND CHESHIRE.

Jan. 13.—The severe weather which has set in has improved the demand for best coal, and has, of course, increased the difficulties of transit. Following as the improved trade does immediately upon the holidays of the season, there, perhaps, appears a greater demand than really exists, but notwithstanding this there is a decided "springing up." Concerning manufacturing classes of fuel there is no improvement, and from the nature of the purchases, which are evidently only for temporary supplies, it is evident that a reduction in rates is anticipated. Prices in the Wigan district (at the pit) were thus quoted:—Arley and King coal, 13s. 6d. to 14s.; Pemberton Four-foot, 11s. to 12s.; common coal, 6s. to 6s. 6d.; slack, 3s. to 5s. It will be seen that prices for inferior sorts are exceedingly low, lower than they have been for several years. Coke is very plentiful, and makers are restricting the output as much as possible. In the Leeds district hopes are held forth that the spring will bring an improvement, and there is a corresponding degree of firmness in the market. Bars are now about 7s. 15s. per ton delivered, and No. 3 foundry ranges from 3s. to 3s. 3s. 6d. per ton.

The difficulties of transit already referred to are again exciting much attention and the probability is that, unless some sign of improvement is seen, the colliery owners will take very decided steps. Some idea of the amount of traffic to be dealt with at Springs Branch alone may be found in the fact incidentally mentioned at a local meeting this week, that the daily traffic in coal reached some 10,000 tons, and that the quantity sent last month was over 360,000 tons. The quantity sent in December, 1874, was 65,000 tons less than this; but in that month the traffic for almost a week was at a standstill, owing to the inability of companies to cope with it.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Jan. 13.—The Derbyshire Iron Trade has undergone little change since the new year set in, and the works as a rule are favourably off for business. The make of pig has been well maintained, and prices recently have stiffened. In manufactured iron the demand has been very fair, and there appears every likelihood of there being an increased enquiry for pipes, as there are several large open contracts that will shortly be given out. Other descriptions of foundry material are in fair request, both in the immediate neighbourhood of Chesterfield, along the Erewash Valley, and at Derby. The weather has had some effect on the house Coal Trade, which is now more active than it has been, whilst prices are very firm. A good deal is going to the London market, as well as to the West of England, where the Derbyshire Silkstone coal has been a great favourite, although it has an extensive coal field of its own. Sinking operations are being pushed forward in several directions in the county, and in the adjoining one, Nottingham, near to Workop, the Shire-oaks Company have got down to the Barnsley coal in their new colliery, which will be connected with the old one. The coal is of good quality, but is not by any means so thick as in some other part of the Midland field.

Several of the Sheffield branches of trade are very quiet, with not much prospect of any immediate improvement. The heavy armour plate mills are likely to have a good run on Government as well as on foreign account. Bessemer rails are scarcely in such request as they have been, and complaints are made by some of the makers of a marked decline in orders. Iron rails are by no means in brisk demand, but the very reverse, and the same is also the case with respect to general cutlery goods, and a considerable number of men are on short time. The foundries, as a rule, have been doing very well, and have started the new year most favourably. In South Yorkshire the coal trade keeps up very well, and prices have rather improved.

To-day the adjourned inquest on the bodies of the men killed by the explosion at the Swatish Main was resumed at the Barnsley Town Hall. A good deal of evidence was taken, but as yet there has been nothing definite or decided with respect to the cause of the catastrophe. All the bodies have been recovered, bringing the total up to 143. The women and children of the unfortunate men are likely to have a hard time of it, for despite the large surplus funds in hand they are not likely to have any portion of them.

For some time past an effort has been made to bring the strike to an end at the Rosa and Old Mill Pits of Mr. Day, at Barnsley, where the men have been out for nearly nine months, but no settlement has been come to.

The fund now being raised for the widow and family of the late Mr. John Normansell is likely to be a success, for amongst those who have given in their names as members of the committee are Mr. W. S. Stanhope, M.P., and Mr. R. Carter, Mayor of Barnsley. The Miners' Association gave a balance of 850l. which was in the bank in the name of Mr. Normansell, deposited to qualify him for the position of a town councillor of Barnsley, and which, of course, the association cannot touch.

The Protector safety-lamp, patented by Mr. Teale, of Manchester, is just now attracting more attention than hitherto, although it is extensively adopted in the South Yorkshire district. This is usually the case after a serious explosion, but the lamp has many good points about it.

At Malinver's Main the coal has been reached at the No. 2 colliery the coal being of average thickness, and of good quality.

The success of the Barrow Hematite Company in finding the well-known Silkstone seam, of excellent quality and 5 ft. thick, below the Barnsley was celebrated on Monday by a banquet at the colliery which was very largely attended. Mr. J. T. Smith, the manager of the company, occupied the chair, and was supported by Mr. Wright, representative of the lessor; Mr. R. Carter, the Mayor of Barnsley; Rev. J. Newman, the Vicar of Worsborough, and a number of other clergymen and gentlemen, including Mr. F. N. Wardell, the Government Inspector; Mr. J. Higson, Mr. Embleton, Chairman of the Midland Association of Mining Engineers; and many others. The usual loyal toasts and the "Bishop and Clergy of the Diocese" having been drunk, Mr. J. T. Smith said that he was glad to compliment the Messrs. Kell on their great success, for they had got down to the coal without a fatal accident. It was more than 30 years since he first became acquainted with the Edmunds family, and for many years he had looked forward to the winning of the Silkstone coal on their estate. He much regretted that Mr. Edmunds was not present on the occasion, but, as his representative, he congratulated every owner of mines present on the great success which had attended the sinking operations. It was, therefore, with great pleasure that he proposed "Success to the Barrow Hematite Steel Company and their Coal Undertaking at Worsborough." The Chairman, in reply, said that all connected with the company would feel flattered by the way in which the toast had been given, and he might add that any doubts they entertained at first with respect to the coal were dispelled by the spirited action of the Messrs. Kell. The future, however, rested very much in the hands of the men, for the question of capital and labour was now becoming a most important one. But he would say that the company he was connected with would meet the men in a liberal, kind, and conciliatory spirit. "The Mining Interests of the South Yorkshire District and Her Majesty's Inspectors of Mines" having been drunk, and the toast of the health of the Chairman duly honoured, in

replying to the toast of "The Engineers of the Barrow Colliery," Mr. J. G. Kell said that he felt pleased in having been the first to prove the Silkstone coal below the Barnsley bed. He hoped that the men and the masters would endeavour to work amicably together, and then he felt sure South Yorkshire would be second to no mining district in the kingdom. The last toast, "The Contractors and Workmen at the Barrow Collieries," was given by the Chairman, and replied to by Mr. Chapman, the manager.

PRESENTATION.—On Saturday, Jan. 1, the officials and workmen of Manver's Main Colliery presented Mr. J. F. Thomson, the manager, and Mrs. Thomson with a splendid testimonial, consisting of silver tea and coffee service and claret jug, from the well-known firm of Messrs. Dixon and Sons, of Sheffield, and a timepiece, a magnificent work of art, from the shop of Mr. Burrell, Sheffield. The timepiece bears the following inscription:—"Presented to Mr. and Mrs. J. F. Thompson this timepiece, with a silver service, by the officials and workmen of Manver's Main Colliery and friends as a token of their high respect and esteem. Wath-upon-Dearne." Mr. Gomersall, engineer, made the presentation, and Mr. Stringer, foreman of the carpenter's, in a neat speech highly eulogised Mr. Thompson's character during the time he has been amongst them for bravery and fearlessness in the discharge of his duties. Mr. Thompson made a suitable reply, thanking the men for their kindness and consideration.

NEW COAL FIELDS.

Singular as it may appear whilst we are told that in some districts in the Great Northern Coal Field large numbers of men are only partially employed at the collieries, yet in others extensive sinking operations are being successfully carried out, and the production immensely increased. In almost every field in the kingdom new collieries, during the last three or four years, have been extensively opened out, and the results are shown in the rapidly increasing output of coal. In South Wales some very large collieries have been opened out. The same has been the case with respect to almost every other mining district in the kingdom. In no part of the country has so much been done in the direction indicated than in what is known as the Great Midland Coal Field—the largest in England, and running in almost direct line from Nottingham to Leeds. In Derbyshire some very extensive collieries have been opened out to the Black shale, and also to the "Top hard," or Barnsley seam. Only a few days ago the Shire-oaks company reached the Barnsley bed in their new sinking near Workop at a depth of 500 yards. This will consequently be the deepest pit throughout the entire field. In Yorkshire, during the last three years, upwards of 150 new collieries have been commenced, and at many of them the coal has been won. But perhaps the most important of all the undertakings has been the sinking direct from the Barnsley thick coal to the well-known Silkstone seam. This has just been accomplished at three places close to each other, and situated but a short distance from Barnsley. The output from each of these collieries is expected to be about 1200 tons per day.

The Barrow Hematite Company won the coal a short time since, and the important event was duly celebrated on Monday by a banquet, particulars of which will be found in another part of the Journal. But another opening has just been effected in the same direction, for on Friday last Messrs. Wells, Birch, Ryde, and Co. (Limited) reached the Silkstone seam at Hoyland, in their 20 ft. shaft, at a depth of 506 yards. This depth has been sunk in one year and ten months, perhaps the quickest sinking on record. Messrs. Wells, Birch, Ryde, and Co. were the first to commence sinking to the Silkstone below the Barnsley seam. Three years ago this month the shaft first commenced, being 14 ft. in diameter; it was carried down to a depth of 400 yards, when it reached the Parkgate seam, and the company continued the sinking in this pit it would have reached the Silkstone seam at least four months before their neighbours at the Barrow Collieries. The shaft was, however, stopped at the Parkgate, and for the time being only the 20 ft. shaft carried out. As a comparison of rapid sinking, it may be stated that the 20 ft. shaft at Hoyland did not start till six months after the Barrow sinking commenced, and although the area of the large Hoyland shaft is nearly double that of any of the Barrow pits, it has reached the Silkstone only one month after the pit at Worsborough. It is a well-known fact in the district that the Hoyland Company were the first to originate and organise a sinking to the Silkstone seams below the Barnsley bed, at a time when the idea was thought to be of the most visionary description. The first negotiations commenced so far back as 1871, and 12 months elapsed before they could be completed, so great was the apathy and scepticism which prevailed on the subject.

The Hoyland Company have been rewarded by finding the thickest seam of Silkstone has been proved by the new winning, the Hoyland section being 8 in. thicker than the Barrow Collieries section, and 15 in. thicker than Messrs. Newton, Hambers, and Co.'s Rockingham section. The Hoyland section being 5 ft. 8 in. of splendid coal. Perhaps the most remarkable fact about this question is the coal thickening to the dip. There were fears entertained by many people that it would thin out to the dip, but results show exactly opposite, as the Silkstone is not only much thicker, but it is of a much denser and richer quality than has been proved along the outcrop where the Silkstone has hitherto been worked. In addition to proving the Silkstone, Messrs. Wells, Birch, Ryde, and Co. have gone through the Lidgit, Swallow Wood, Parkgate, and Thorncliffe thin seams. They are now working the Lidgit seam, Hoyland being the only place in Yorkshire where it is worked, is considered to be on a par with the first Silkstone for quality, and a coal which has had a remarkable run in the London markets. The success which has attended the opening out of the Silkstone seam below the Barnsley, the depth from each other being about 380 yards, will be the means of giving confidence to colliery owners connected with such a field of fine coal hundreds of square miles in extent, and leading to very large and important sinkings.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the upward tendency in prices, before referred to, has made further progress in nearly in all departments of the market. In shares of iron and coal concerns, the only fall is in Lochore and Capeldrae, amounting to 1/2; but it must be remembered they had previously had a sharp rise. Cardiff and Swansea Colliery is easier also at 2 1/2 sellers. The principal favourable movements are:—2 1/2 on Bolckow, Vaughan, A; 1 1/2 on Monkland 7 per cent. guaranteed; 1 1/2 on ditto, ordinary; 1/2 on Arncliffe; and 1/2 each on Benhar, ditto new, and Omoa and Cleland. Shares of Foreign copper concerns have been well sought, Cape rising 1; Tharsis, 2 1/2; and ditto, new, 2. Rio Tinto is unaltered, at 6 1/2. Yorke Peninsula lower, at 8s. 6d. In home undertakings only a little has been done; prices are:—East Van, 8 1/2 to 8 3/4. Glasgow Caradon unaltered, at 15s.; but new shares a trifle lower, at 22s. 6d. to 23s. 6d. Gunnislake (Clitters), 3 1/2 buyers. Great Laxey, 16 to 17. Penstruthal, 9s., sellers. Plynlimmon Lead, 6s. to 8s. Prince of Wales, 3/4 buyers; the meeting, it is said, will be on the 20th of 21st inst., and a call made. Tylwyd, 17s., sellers. In shares of gold and silver mines, the principal business has been in Emma, which is 8s. higher or the week per share. Australasian Mines offer at 7 1/2. Exchequer, at 7 1/2. Frontine and Bolivia have moved to 2 1/2. In oil shares, Young's Paraffin fell to 7 1/2, but seems to be improving again, now 7 3/4. In miscellaneous, prices all a little higher, but no movements calling for particular notice. A detailed list of the several days' business follows:—

On THURSDAY last a fair business was done. Australasian Mines, 7 1/2, sellers. Benhar, 11 1/2 to 11 7/8; new shares, 6 1/2 to 6 3/4. Bolckow, Vaughan, A, 2 1/2 to 2 3/4. Canadian Copper Pyrites, 28s. to 29s. Cardiff and Swansea, 2 1/2 to 2 3/4. Glasgow Caradon done at 35s., closing 34s. 6d. to 35s. 6d.; new shares, 22s. 3d. to 23s. 6d. Gunnislake (Clitters), 3 1/2 buyers. Lochore and Capeldrae, 7 to 7 1/2. Monkland, 5s. to 5 1/2. 7 per cent. guaranteed, done at 10s., closing 9 1/2 to 9 3/4. Vant-y-Glo and Blaira (pref.), done at 32. Omoa and Cleland done at 55s. and 6s., closing 56s. to 58s. 6d. Richmond done at 7 1/2 and 7 3/4, closing 7 1/2 to 7 3/4. Santa Barbara, 21s. 6d. to 23s. 6d. South Aurora, 7s. to 9s. Tharsis done at 22, closing 21 1/2 to 22; new shares done at 14 1/2. Young's Paraffin done at 7 1/2, closing 7 1/2 to 7 3/4.

On FRIDAY the market was quiet. Arncliffe done at 7 1/2. Benhar done at 11 1/2, closing 11 7/8 to 11 3/4; new shares, 6 1/2 to 6 3/4. Bolckow, Vaughan, A shares done at 52, closing 51 1/2 to 52 1/2. Canadian Copper Pyrites done at 28s. Ebbw Vale, 13 1/2 to 14 1/2. Exchequer, 13s. 6d., sellers. Huntington done at 25s. and 26s. 6d., closing at these prices. Killifreth, 3/4, sellers. Lochore and Capeldrae, 4 1/2 to 6 1/4. London and Glasgow Engineering shares higher, done at 22, buyers. Marbella done at 80s., closing 79s. to 81s. Monkland done at 55s., closing 56s. to 58s.; 7 per cent. guaranteed done at 5 1/2, closing 5 1/4 to 6. Omoa and Cleland, 55s. to 58s. Richmond at shares in 7 1/2 and 7 3/4, closing 7 1/2 to 7 3/4. Rio Tinto, 4 to 6 1/2. Tharsis done at 22, closing 22 to 22 1/2; new shares done at 14 1/2, closing 14 1/2 to 15. Scottish Wagon, 11 to 11 1/2; new shares, 4 1/2 to 4 3/4.

On SATURDAY the market was again quiet, but firm. Benhar, 11 1/2 to 11 3/4; new shares, 6 1/2 to 6 3/4. Bolckow, Vaughan, A shares done at 52. Emma, 26s. to 27s. 6d. East Van, 7 to 7 1/2. Glasgow Caradon, 31s. to 35s.; new shares done at 23s. 6d. The next sale of copper ore by this company is computed 240 tons, for Jan. 30; last month's sale was 225 tons, while the corresponding sales in 1875 and 1874 were respectively 240 and 250 tons. Huntington done at 28s., closing 28s. 6d. to 29s. 6d. Lochore and Capeldrae done at 6 1/2, closing 6 1/2 to 7. Monkland done at 55s., closing 56s. to 58s.; 7 per cent. guaranteed done at 6, closing 6 to 6 1/2. Penstruthal, 9, sellers. Richmond, 7 1/2 to 7 3/4. Rio Tinto, 8 to 6 1/2. South Roskear, 1 1/2, sellers. Tharsis done from 22 1/2 to 22 3/4, closing 22 1/2 to 22 3/4; new shares done from 14 1/2 to 15 1/2, closing 15 1/2 to 15 3/4. Young's Paraffin shares done at 7 1/2, closing 7 1/2 to 7 3/4. Yorke Peninsula, 8s. 6d., sellers. Scottish Wagon, 11 to 11 1/2; new shares, 4 1/2 to 4 3/4.

On MONDAY (being contingent day) the business done was small. Arncliffe, 7 1/2 to 7 3/4. Benhar, 11 1/2 to 11 3/4; new shares, done at 6 1/2 to 6 3/4, closing 6 1/2 to 6 3/4. Bolckow, Vaughan, A, done at 52. Cardiff and Swansea Colliery done at 2 1/2. Ebbw Vale, 13 1/2 to 14 1/2. Exchequer, 13 1/2 to 14. East Caradon, 13 1/2, buyers. East Van, 8 1/2 to 9. Everhardt and Aurora, 9 1/2 to 9 3/4. Emma done at 28s. and 27s. 6d., closing 1 1/2 to 1 1/4. Gunnislake (Clitters), 3 1/2, buyers. Lochore and Capeldrae done at 7, closing 7 to 7 1/2. Marke Valley, 3 1/2, buyers. Monkland, 3 to 3 1/2; 7 per cent. guaranteed, 6 1/2 to 6 3/4. Omoa and Cleland done at 55s. 6d., closing 56s. to 57. Plynlimmon Lead, 6s. to 8s. Richmond, 7 1/2 to 7 3/4. Tecoma, 10s. to 11s. Tharsis opened at 22 1/2, but improved to 23 1/2 18ths, closing about 23 1/2; new shares done from 15 1/2 to 15 3/4, closing 15 to 15 1/2. Young's Paraffin, 7 1/2 to 7 3/4. Scottish Wagon, 11 to 11 1/2; new shares, 4 1/2 to 4 3/4. The following were the rates of continuation current to-day:—Contingent: 2d. on Canadian Copper Pyrites: 1d. on Emma: 2d. on Glasgow Caradon: 1 1/2d. on new shares: 3d. on Port Washington: 3d. on Huntington: 2d. on Marbella: 2 1/2d. on Monkland: 1d. 1 1/2d. and 2d. on Richmond: 6d. on Rio Tinto: 1s. 9d. on Tharsis: 9d. on new shares: 6d., 7 1/2d. on Young's Paraffin. Even: Omoa and Cleland. Backwardation: 5s. on Shotts. The principal changes in these rates compared with those current at last settlement are in the case of Tharsis, and Richmond and Tharsis, the former being lower, while that on the latter is higher. The making-up prices of the undermentioned shares show

the following variations for the account—viz., rises of 2s. on Emma; 1s. 6d. on Port Washington; 1/2 on Maraballa; 1/2 on Monkland; 1s. on Omoia and Cleland; 1/2 on Tharsis; 1 on new shares. Falls of—1s. on Glasgow Caradon; 1/2 on Richmond; 1/2 on Young's Paraffin; the dividend, however, of 4s. 6d. per share has been left on these last-mentioned shares during the account. Canadian Copper Pyrites, Huntington, Rio Tinto, and Shotts are unaltered.

NIDBIE COAL COMPANY (Limited).—It will be remembered that this company effected an amalgamation last year with the Benhar Company, and resolved to wind up. At a meeting to day (Monday) the proceedings under which the amalgamation was effected and the closing of the liquidation were reported, and the liquidators instructed to make their return to the Registrar of Joint Stock Companies accordingly.

On Tuesday the account opened for settlement 28th inst.; Tuesday, 25th inst., will be the day of the market was active. Arncliffe, done at 7 1/2; Australasian Mines, 3 1/2; Benhar, 1 1/2 to 1 1/4; new shares, done at 6 1/2, closing 6 1/2; Emma, done from 30s. to 34s., closing 34s. to 35s. Exchequer, 11s. buyers. East Van, 2 1/2; Frontino and Bolivia, 2 to 2 1/4; Lochore and Capleirae, done at 7 1/2, closing 7 1/2 to 7 3/4; Monkland, 3 1/2 to 3 3/4; 7 per cent. guaranteed, 6 1/2 to 7. Omoia and Cleland, done at 58s. 6d. and 58s., closing 58s. to 58s. Penrith, 8s. to 9s. Richmond, 7 1/2 to 7 3/4; this week's run is announced by cablegram from the mine at \$38,000, the message adding—"One still low in lead." Tyllwyd, 16s. 3d., sellers. Tharsis opened higher at 24, declined to 23 1/2, again advanced to 24 1/2, but relapsed to 23 1/2, closing 23 1/2 to 23 15-16ths; new shares, done from 16 to 16 1/2, closing 16 1/2 to 16 3/4. Young's Paraffin, done from 7 1/2 to 7 3/4, closing 7 1/2 to 7 3/4. Scottish Wagon, 11 to 11 1/2; new shares, 4 1/2 to 4 3/4.

On Wednesday a fair business was done. Benhar, 1 1/2 to 1 1/4; new shares, 6 1/2 to 6 3/4. Bolckow, Vaughan, A. 52 to 54. Emma, done from 30s. to 31s., closing 31s. to 33s. Exchequer, 11s. sellers. Glasgow Caradon, done at 35s., closing 31s. 6d. to 35s. 6d.; new shares, 2 1/2 to 2 3/4. Glasgow Port Washington, done at 4 1/2. Gunnislake (Clitters), 3 1/2, buyers. Monkland, done at 58s. and 57s., closing 58s. to 57s. Omoia and Cleland, done at 58s., closing 58s. to 59s. Prince of Wales, 1 1/2, buyers. Richmond, 7 1/2 to 7 3/4. Tharsis, done from 23 1/2 to 23 3/4, closing about the latter price; new shares, done from 16 to 16 1/2, closing 16 1/2 to 16 3/4. Young's Paraffin, done from 7 1/2 to 7 3/4, closing 7 1/2 to 7 3/4. Scottish Wagon, done at 11 1/2; new shares, done at 4 3/4.

The following are this week's prices of some stocks, shares, &c., occasionally dealt in on this market, but not quoted (with few exceptions) on any of the Scotch Stock Exchanges—Iron, Steel, and Coal Companies: Andrew Knowles and Sons, 24 to 24 1/2; Bolckow, Vaughan, and Co., "B," 47 to 48; Britannia Ironworks, 10; Cardiff and Swansea Steam Coal, 23 1/2; Chapell House Colliery, 3 1/2 to 3 3/4; Consett Iron Ore, 20 1/2; Gualy Kanawha Coal, 5, sellers; Great Western Colliery, 11 1/2 to 12; Gelliegh Colliery, 5 to 5 1/2; South Leicestershire, 1 1/2 to 1 3/4; Lelgh, 3 to 3 1/2; Gelliegh Colliery, 5 to 5 1/2; first mortgage, guaranteed by Central Railroad of New Jersey (U.S.), 93, buyers; Llynvi, Tondur, and Omoia Coal and Iron, 23 1/2 to 24 1/2; Llynvi Valley Colliery, pref., 9, sellers; Mersey Steel and Iron, 4 1/2 to 5; Mynydd Iron Ore, 2; Newport Abercrom Colliery, 4 to 5; North Lonsdale Iron and Steel, 6 to 6 1/2; Powell's Llanwst Colliery, 1 1/2 to 1 3/4; Scottish Australasian new shares, 4 to 4 1/2; Ulverston Min. ag., 10 1/2 to 11; West Cumberland Iron and Steel, 14 1/2, sellers; Whitehaven Iron, 3 1/2; Copper, Lead, Tin, &c., Co., 3; Bedford United, 1 1/2, sellers; Benlough Lead, 3 1/2 to 4; Bowden Hill Manganese, 1 1/2, sellers; Cook's Kitchen, 5 to 6 1/2; Copiapo Mining, 3 1/2; Denbigh Consols, 2, sellers; Dolcoath, 39 to 41; Drake Walls, 7 1/2, sellers; East Caradon, 1 1/2 to 2; East Wheel Grenville, 1s. 6d., sellers; Elgar, 1, sellers; Great Laxey, 16 to 17; Great West Van, 1 1/2 to 1 3/4; Gunnislake (Clitters), 3 1/2, buyers; Hingston Down, 7 1/2 to 1 1/4; Killbreth, 3 1/2; Old Talarogh Lead preference, 10, sellers; Marke Valley, 3 1/2 to 3 3/4; New Consols, 1 1/2; New Pembroke, 1 1/2, sellers; New Quebrada, 4; North Hendre Lead, 3 to 4; Parys Mountain, 1 1/2 to 1 3/4; Penrith, 8s. 6d., sellers; Prince of Wales, 1 1/2; Plynlimmon Lead, 6s. to 6s. 8d.; Rio Tinto, 6 to 6 1/2; Snowbrook, 5, sellers; South Cornwall, 5 to 5 1/2; South Leicestershire, 1 1/2 to 1 3/4; Eberhardt and Anderson, 3 1/2 to 4; Exchequer, 11s. 1/2, sellers; West Maria and Fortescue, 8s. 6d., sellers; West Poldice, 24; West Wheel Frances, 8 1/2 to 9 1/2; Wheel Basset, 20 to 25; Wheel Kitty (St. Agnes), 23 1/2 to 24; Mary Hutchings, 1 1/2; York Peninsula 15 per cent. guaranteed preference, 3 1/2 to 4; Yorkshire Mining, 3-10ths to 1/2; Gold and Silver Companies: Almada and Tinto, 3 1/2 to 3 3/4; Argentine, 6 1/2 to 7; Australasian Mines Investment, 1 1/2 to 1 3/4; Basse Consols Silver, 5, sellers; Battle Mountain, 1 to 1 1/4; Cedar Creek, 3 1/2 to 4; Chontales, 1 1/2 to 1 3/4; Colorado Terrible Lode, 1 1/2 to 2; Don Pedro North Lead, 1 1/2 to 1 3/4; Eberhardt and Anderson, 3 1/2 to 4; Exchequer, 11s. 1/2, sellers; Glenfarg and Bolivia, 2 to 2 1/4; L.L.L., 3; Gold Run, 18s., sellers; Javali, 1 1/2 to 1 3/4; Malpas, 5 1/2; New Pacific, 1 1/2; New Zealand Kapanga, 1 1/2 to 1 3/4; Pestarena United, 1 1/2; Port Phillip and Colonial, 5 1/2 to 6; Rica, 2s. to 4s.; Sta. Barbara (late Par), 21s. 6d. to 23s. 6d.; So. Aurora, 7s. to 8s.; Sweetland Creek, 2 1/2 to 3; Teocoma, 1 1/2, buyers; Thornhill Reef, 3 1/2; United Mexican, 3 1/2 to 3 3/4; Welsh "The," Gold, 1 1/2; Winter's Freehold, 3 1/2, sellers. Miscellaneous Companies: Aberdeen Lime, 7 1/2; Bede Metal and Chemical, 3 1/2, sellers; British Agricultural Association, 2 to 2 1/2; ditto 7 per cent. preference, 5, sellers; Conglog Slate and Slab, 10, sellers; General Sewage and Manure, 4 to 5; Langdale's Chemical Manure, 3 1/2, sellers; Law's Chemical, 7 1/2 to 7 3/4; ditto 7 per cent. preference, 10, sellers; Native Guano, 3 1/2; Newcastle Chemical, 3 1/2, sellers; North Cornwall Kaolin, 1 1/2, sellers; Phospho-Guano A, 7; ditto B, 2; Thames Chemical, 6, sellers; and subjoined are the latest prices, &c., of those quoted on the Stock Exchanges—

Per share.	Paid up.	Previous.	Rate per cent.	Description of shares.	Last price.
2 10	10	10	10	COAL, IRON, STEEL.	
10	10	10	10	Arncliffe Coal (Limited)	7 1/2
10	10	10	10	Benhar Coal (Limited)	11 1/2
10	10	10	10	Ditto	6 1/2
100	35	12 1/2	12 1/2	Bolckow, Vaughan, and Co. (Lim.)	53
10	10	10	10	Cairn's Gas Coal (Limited)	2 1/2
10	10	10	10	Chillingham Iron (Limited)	5
32	29	7	7 1/2	Edw. Vale Steel, Iron, and Coal (Lim.)	13 1/2
10	4	nil	nil	Fife Coal (Limited)	4
10	10	10	10	Glasgow Port Washington Iron & Coal (L)	4 1/2
10	10	10	10	Ditto	81s. 6d.
10	10	10	10	Lochore and Capleirae (Limited)	7 1/2
10	10	10	10	Maraballa Iron Ore (Limited)	4
10	10	10	10	Monkland Iron and Coal (Limited)	6 1/2
10	10	10	10	Ditto	6 1/2
100	100	nil	nil	Nant-y-Glo & Blaenau Ironworks pref. (L)	32 1/2
10	4	15	15	Omoia and Cleland Iron and Coal (Lim.)	58s.
1	1	15	15	Scottish Australasian Mining (Limited)	15 1/2
60	50	10	10	Shotts Iron	65
10	8	10	10	Ditto	New issued at 2 1/2 prem.
10	7	7	7	COPPER, SULPHUR, TIN.	
10	10	10	10	Canadian Copper Pyrites (Limited)	29 1/2
10	10	10	10	Ditto	6 1/2
10	7	20s	20s	Cape Copper (Limited)	39
2	2	12 1/2	12 1/2	Dunlop's Phoenix Tin (Limited)	24
1	1	12 1/2	12 1/2	Glasgow Caradon Copper Mining (Lim.)	1 1/2
1	15s.	12 1/2	12 1/2	Ditto	23s. 6d.
10	9	10	10	Huntington Copper and Sulphur (Lim.)	23s.
25s.	23s.	10	10	Kapunda Mining (Limited)	1 1/2
4	4	10	10	Panulicillo Copper (Limited)	1 1/2
10	10	10	10	Russian Copper (Limited)	3
10	10	25	25	Tharsis Copper and Sulphur (Limited)	24 1/2
10	7	25	25	Ditto	16 1/2
1	1	1	1	York Peninsula Mining (Limited)	8s. 6d.
10	20	20	20	GOLD, SILVER.	
10	10	10	10	Emma Silver Mining (Limited)	35s.
10	10	10	10	Flagstaff Silver Mining (Limited)	1
5	5	10	10	Last Chance Silver Mining (Limited)	1 1/2
10	5	10	10	Richmond Mining (Limited)	7 1/2
10	7	2 1/2	2 1/2	OIL.	
10	10	10	10	Dalmeny Oil (Limited)	5 1/2
10	10	10	10	Uphall Mineral Oil (Limited)	5
10	8 1/2	5	5	Young's Paraffin Light & Mineral Oil (L)	7 1/2
50	25	16	16	MISCELLANEOUS.	
20	11 1/2	10	10	London and Glasgow Engineering & Iron Shipbuilding (Limited)	22
10	10	10	10	Peruvian Nitrate (Limited)	11 1/2
10	10	10	10	Scottish Wagon (Limited)	11 1/2
10	4	4	4	Ditto	4 1/2

† Interim. ‡ Per share.

Last day for this account Jan. 25; settling day, Jan. 25.

NOTE.—The above list of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in this list, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Jan. 13.

INSTITUTIONS FOR COLLIERIES' ORPHANS.

In connection with the revival of the proposition to make some organised provision for the widows and children of colliers killed by accidents, it should be mentioned that for the last eighteen months Mr. WILLIAM FIRTH, of Barley Hall and Leeds, has been working energetically to establish in the West Riding of Yorkshire an institution of the nature of an orphanage for the children of the class referred to. In the prospectus which Mr. Firth issued in February last it is explained that the objects aimed at are—to found and maintain homes for children whose fathers have lost their lives accidentally at collieries in the West Riding of Yorkshire, or, if afterwards so determined, in the adjacent counties. To feed, clothe, and maintain, and take entire charge of such children until they arrive at a proper age for being put to school; to endeavour to implant in them habits of industry and discipline, and to secure for each a suitable education. As reasons for promoting such an institution, Mr. Firth mentions that the extraction of coal from our mines, under the most perfectly constructed plans and machinery, unavoidably involves a very large amount of danger to those who are engaged in the work; and there is also a large amount of personal injury from the same accidental causes, often producing incalculable suffering and privation, whilst the average duration of the lives of colliers is very short.

It unfortunately cannot, he continues, be denied that during the past two years habits of great improvidence have characterized some of the colliers, but it is confidently hoped that if certain traces will not deprive their children of the sympathy of the public, for, considering the want of opportunities which have been afforded to the present generation of working colliers for educational training they are specially entitled to be judged in a spirit of charity and forbearance. At all

events, the children of those who lose their lives accidentally, while engaged in a dangerous but indispensable service of paramount national importance, ought not to be left in helpless destitution because of the errors of individual members of that most useful body of men to which their fathers belonged.

It is remarkable, as Mr. Firth very justly observes, that in this country, where benevolent institutions are so liberally supported, there is not one specially provided for the children of those employed at our collieries. To their great honour, working miners themselves distribute a large amount of money to the widows and orphans of the members of their Unions; but it is well known that this is not nearly sufficient to meet the real necessities. Moreover, there are large numbers of men who are not members of any Union, and who are debared, both in their own persons and in that of their families, from participation in Union funds.

The plan suggested is to raise, by endowment and annual subscription, an amount sufficiently large, in the first instance, to deal with a considerable portion of the requirements of the West Riding of Yorkshire, and afterwards the area of the usefulness of the institution may be enlarged with the growth of the means. It is estimated that to provide and furnish the buildings necessary for the accommodation of 500 children about 20,000l. will be required, with an annual income of about 6000l., and a proportionate decrease for any smaller number.

DEFECTIVE COLLIERY VENTILATION.

Colliery engineers should make a note of what occurred in the Chesterfield County Police Court on Saturday. Mr. PHILEMON HICKS, the manager of the Tupton Colliery, appeared as the defendant in a case brought by the authority of the Home Office, which alleged that he had infringed the Mines Regulation Act in neglecting to provide sufficient ventilation in a mine, and had thereby endangered the lives of the colliers working in it. It transpired that the ventilation was by means of a furnace, over which, when Mr. A. H. STOKES, Assistant Inspector of Mines for the district, visited the place on the 17th ult., only 6021 cubic feet of air per minute was passing. Seeing that this was hardly more than one-fifth of what would have constituted sufficient ventilation, it should not be cause for surprise that when Mr. STOKES got further in the workings the gas fired at his lamp. A gate, which is described as No. 82, ought at the same time to have been closed, but it was open, and the air passing at that point was unquestionably altogether inadequate to carry off the gas, seeing that it was merely 1300 cubic feet. It will not be cause for astonishment that Mr. T. EVANS, the Government Inspector, should have concurred with his assistant, that there was not sufficient ventilation to keep Mr. HICKS from bringing himself within the terms of the Act. Mr. HICKS, on his part, pointed out that whilst in 1874, when he became the manager of the mine, he found the ventilation confined to from 5000 ft. to 6000 ft., he had increased it to 9600 ft. This having been done, the complaints by the miners, which before were numerous, had not since been repeated. He did not think that there was a large accumulation of gas, nor did he regard the pit as a fiery one, and the reason the ventilation was not so good on the 17th of December as usual was traceable to an accident which had happened to the pumping machinery on the previous day. It was the view of Mr. HICKS that what gas there was in the pit could be kept under control by their which he was supplying. Mr. SIDDELS, who is under-viewer to Mr. HICKS, told the magistrate that he considered the quantity of air quite sufficient. The magistrate, Mr. F. SWANWICK, showed his disaccord with the views of Mr. HICKS and his underviewer by fining Mr. HICKS 10l. and costs.

It was altogether reasonable that the law should have been put in force in this instance; for, while there may be some difference of opinion as to whether 30,000 ft. of pure air per minute was required, or whether a smaller quantity of air would have been enough to keep the mine free from gas, there could be little doubt that even the maximum quantity Mr. HICKS succeeded in forcing into it was certainly insufficient. The entry in the book was to the effect that 9000 ft. was the quantity per minute passing over the furnace, and it is not for us to say that the entries were inaccurate; but so great a diminution as nearly 3000 ft. is something startling, as the result merely of an accident to the pumping machinery. It is greatly to the credit of someone in the mine that during the ten years that it has been in existence there have been no explosions. We have seen it suggested that very excellent mine management, which embraces an abundance of ventilation, sometimes leaves colliers to presume upon their safety, and to indulge in recklessness. The opposite is more likely to have been the case here. The 5000 or 6000 ft. of which the men complained before Mr. HICKS became the manager of Tupton Colliery, it is more than likely led to extra caution by the men. If so, then they have to thank themselves, and not those under whom they served, for their safety. We are unable to give Mr. HICKS all the benefit of the better ventilation, such as it was, which under his management was brought about, since it is made known that more men were employed simultaneously with the introduction of the larger quantity of air. Nor are the facts we have already given an account of the whole state of things.

The records in the report book of the pit were simply humiliating. They set forth that for weeks before Mr. STOKES visited the mine gas had been found in nine or ten places. It had not been omitted to fence off some places in which gas was detected, but we all know how very delusive such precautions too often prove. Fencing off merely is evermore attended with great risk. The least disturbance will sometimes bring out the enemy from its lurking-place, and destruction is dealt out in a wholesale manner. We are not prepared to attribute responsibility for the condition of affairs at this pit to anyone but to the people having the immediate charge of it. Mr. EVANS made efforts 12 months ago to get the ventilation improved, and he told the magistrates that Mr. HICKS had then promised to have a fan put down. No doubt the fan is liable to get out of order, as well as the current of air passing over the furnace to lessen, but a fan can accomplish that which is utterly impossible with a furnace; and Mr. HICKS's promise to put down a fan would seem to imply that he was then at one with Mr. EVANS in regarding that as the better method of ventilating Tupton Colliery. The fan will now, we trust, be put down. Acting upon what we believe to be our duty to the mining interest, we from time to time direct attention to breaches of, and disregard of, duty by the rank and file of our workers, and we are unprepared to throw the mantle of secrecy over deceptions of duty by those who command the industrial armies. The proceedings at Chesterfield may, it is our wish, prove of benefit far beyond this Tupton Colliery. We are only too much afraid that elsewhere throughout our coal fields the margin between safety and danger is cut too fine—that colliery engineers are peculiarly fond of driving as near as can be to the precipice without hurling themselves over, instead of keeping far enough away from the point of danger. Such men would do well to heed the advice with which we started. Furnace ventilation has done some good work in its day, but there are numerous instances now existing in which it ought to give way to ventilation by fan.

THE SWAITHS MAIN COLLIERY EXPLOSION.—The enquiry before the Coroner was brought to a close yesterday. Mr. F. Wardell, the Government Inspector of Mines for Yorkshire, gave it as his opinion that the explosion was not caused by the firing of a shot, but in all probability from a defective lamp—either one of the short Stephenson's, or it might be a Clanny, several of which were in use in the pit. The gas might also have come down at a great velocity, and so ignited a good lamp. After an absence of two hours the jury returned the following verdict:—"The jury find that James Blackburn, James Allan, and others, came to their deaths at the Swaiths Main Colliery, on Dec. 6, 1875, by an explosion, or explosions, of fire-damp, but how such explosion, or explosions, originated there is not sufficient evidence to show. We are likewise of opinion that, according to the evidence, the Swaiths Main Colliery is a fiery mine, and that the general and special rules have not been rigidly carried out, and that gunpowder has been recklessly used. The jury are also of opinion that in all mines where safety-lamps are used the using of gunpowder should not be allowed, excepting in stone drifts, and then only when all the miners are drawn out. The jury desire the Coroner to forward this opinion to the Secretary of State for the Home Department. We also regret that the miners had not carried out General Rule 30, and think this rule should be strictly adhered to. The verdict is one that will meet with general concurrence. It may be said Mr. Wardell, Government Inspector, has long been opposed to the use of gunpowder in the fiery mines of South Yorkshire.

COPPAO MINING COMPANY.—It is gratifying to find that this company, after a lengthened period of adversity, has re-entered the Dividend List, the directors having, at their meeting last week, declared a dividend of 2s. 6d. per share, and it is hoped that henceforward profits will be regularly distributed.

NEW CONSOLS TIN AND ARSENIC WORKS.—The meeting held on Saturday unanimously confirmed the special resolutions passed the previous week, and we understand that Sir James Anderson, whose name is so well known in connection with telegraphy, has been appointed chairman of the company. The copper and silver works are attracting much interest, and this company deserves great credit for carrying out on a large and practical scale the extraction of metals by a process which may become of inestimable value to many mines in the kingdom. The works are now about to be considerably extended, and comparatively little has to be done to prove the property one of the best concerns in the kingdom.

TENDERS FOR STORES.

THE DIRECTORS OF THE ROTHERHAM, MASBRO', AND HOLMES COAL COMPANY (LIMITED), INVITE TENDERS for the SUPPLY of TIMBER, CORVES, IRON CASTINGS, and STORES, as may be required by them during the current year.

Specifications and forms of tender can be had on application at the Colliery Offices, The Holmes, Rotherham.

Tenders must be sent in not later than Tuesday, the 25th instant, marked "Tender for Stores."

The Directors do not bind themselves to accept the lowest or any tender.

Holmes Colliery, 8th January, 1876. R. J. EVANS, Secretary.

THE DIRECTORS OF THE GIONA SULPHUR COMPANY (LIMITED), ARE PREPARED TO RECEIVE TENDERS FROM PARTIES DESIROUS OF LEASING THEIR MINES IN SICILY.

The property comprises about 300 acres, on which are the well-known mines of Giona, Gionatella, Tenuta, Tenutella, &c., a few miles from Girgenti.

All tenders must contain the names of two references, and the lessee or lessees will be required to deposit the sum of £5000 as security for the due performance of the covenants of the lease. Draft lease, and all further particulars may be seen at the offices of the company, 41, Wool Exchange, Coleman-street, City, London (where tenders are to be sent).

The Directors do not bind themselves to accept the highest or any tender.

Tenders will be sent in not later than the 25th January, to be opened on the 27th January, 1876.

THE PATENT GUNPOWDER COMPANY (LIMITED),

HAVING engaged the SERVICES of Mr. J. B. THISTLETON, ANALYTICAL CHEMIST (Royal Polytechnic Institution), are prepared to SUPPLY BLASTING POWDER in sizes to fit bore-holes from 1/4 in. to 2 1/2 in., SIX TIMES STRONGER THAN ORDINARY BLASTING POWDER. No perceptible smoke, smell, or residuum. Orders punctually attended to.

OFFICES—6, GREAT WINCHESTER STREET BUILDINGS, LONDON.

WORKS—GLYN CEIRIOG, near LLANGOLLEN, NORTH WALES.

WANTED, for the better development of an English Smelting Works in Spain—a regular going concern—a PARTNER, with £2000 at his command.

Letters addressed to "R. G., No. 5," MINING JOURNAL, 25, Fleet-street, London.

WANTED, a MINING CAPTAIN, from 23 to 35 years of age, DRESSING FLOORS, and SUPERINTENDING DRESSING. Must have had great experience in this department, and be able to draw out plans for and superintending making of the necessary machinery. He may be under a Resident Manager, but will have to advise as to, and at times take charge of, the underground operations.

Apply, stating experience, references, and salary expected, "W.," MINING JOURNAL Office, 25, Fleet-street, E.C.

WANTED, a SITUATION as ASSISTANT MANAGER. The Advertiser is a competent Assayer, Draughtsman, Dialler, and Leveler. If required, testimonials can be forwarded.

Address, stating salary given, "S. G. B.," MINING JOURNAL Office, 25, Fleet-street, London.

WANTED, 10 ton WEIGHBRIDGE (secondhand); also TWO 9 to 12 ft. TURNTABLES, in the neighbourhood of PLYMOUTH.

Address, "F. W.," 14, Abbey Mead, Tavistock.

WANTED, for the ROMAN GRAVELS MINE, SHROPSHIRE, a 45 or 50 in. cylinder BEAM CORNISH PUMPING ENGINE, stroke in shaft 8 or 9 ft., all the parts to be in good working order; or a BULL ENGINE, of same size and length of stroke, with working gear, balance bob, &c., complete, would do; f.o.b. ship or trucks.

Tenders to be sent to Mr. ARTHUR WATERS, Radbrook, Shrewsbury.

Dated 12th January, 1876.

TO MINING COMPANIES.

A MINE AGENT, of long experience in Cornwall and Foreign Countries—thoroughly acquainted with Pumping and Winding Machinery, the Separation of Lead and Blende, and other Minerals, mechanically; a good knowledge of Copper Smelting, speaks English, French, and German—DESIRE a RE-ENGAGEMENT. Inspections and negotiations undertaken. Unexceptionable references.

Address, "C. E.," St. Antonin, Porte Restante, Tarn-et-Garonne, France.

A GENTLEMAN, 25 years of age, wishes RE-EMPLOYMENT as ASSISTANT CIVIL AND MINING ENGINEER. Has had several years' experience, and speaks English, French, and German. First-class references and testimonials.

Address, "G. A. K.," MINING JOURNAL Office, 25, Fleet-street, E.C.

TO COLLIERY PROPRIETORS, &c.

THE ADVERTISER, desirous of EXTENDING his BUSINESS in a first-class locality, would be glad to BORROW £2000. Has a good household connection, and any proprietor who can ensure a supply of best House Coal, &c., can have 5 per cent. interest, and secure a good business.

Address, "M.," Post Office, Bootle, near Liverpool.

PROMOTERS or FINANCIERS, who are in a position to RAISE CAPITAL for WORKING a MINE already in work on a small scale, with machinery erected, may meet with an undertaking worthy of their attention, by applying to "W. F. M.," care of Mr. J. Murray, 7, Victoria Parade, Torquay.

T A N - Y - G R A I G M I N E .

Full particulars of this Mine may be obtained on application to—

CAPT. EDE, Llanarmon, near Mold.

RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of the Richmond Consolidated Mining Company (Limited) will be held at the City Terminus Hotel, Cannon-street, London, on TUESDAY, the 15th day of January, 1876, at two o'clock in the afternoon, to give effect to the resolution which was passed at an Extraordinary General Meeting of the said company, on Wednesday, the 22nd day of December, 1875, which resolution was—"That the remuneration of the directors, provided for by Clause No. 72 of the Articles of Association of the said company, be increased; and that the said Clause No. 72 be varied as follows—namely, by increasing the first-mentioned sum of £500 per annum in such Clause to £1000 per annum; and by increasing the second-mentioned sum of £500 per annum in such Clause to £1000 per annum."

168 SHARES OF £10 EACH (FULLY PAID) IN THE CHICAGO SILVER MINING COMPANY (LIMITED), UNITED STATES OF AMERICA.

MESSRS. RUSHWORTH, ABBOTT, AND RUSHWORTH WILL SELL, BY AUCTION, at the Mart, Tokenhouse-yard, near the Bank of England, on Wednesday next, January 19th, at One for Two o'clock precisely, in Three Lots, 168 SHARES OF £10 each (fully paid) in the CHICAGO SILVER MINING COMPANY (LIMITED).

Particulars may be obtained of Messrs. NEWMAN, STRETTON, and HILLIARD, Solicitors, 75, Cornhill, E.C.; of Messrs. RUSHWORTH, ABBOTT, and RUSHWORTH, 22, Saville-row, W., and 19, Change alley, E.C.; and at the Mart.

TO BE SOLD, pursuant to a Decree of the High Court of Justice, Chancery Division, made in the Causes of POTTON v. MARRIOTT and Others, and PHILLIPS v. MARRIOTT and Others, with the approbation of the Vice-Chancellor Sir James Bacon, the Judge to whose Court this Cause is attached, in Two Lots, by Mr. JOHN CHURTON, the person appointed by the said Judge, at the Grosvenor Hotel, Chester, on Saturday, the 5th day of February, 1876, at One o'clock in the afternoon precisely, certain FREEHOLD LAND and BUILDINGS, with the COAL under the same, known as the ALLSUP LAND, adjoining the Wern Colliery, situate at BAGILLT, in the parish of HOLYWELL, in the county of FLINT, comprising a surface area of nearly Nine Acres, late the property of George Ainsup, deceased.

Particulars whereof may be had gratis of Messrs. BLAKE and SNOW, Solicitors, 22, College Hill, Cannon-street, London; Mr. JOHN LITTS, 8, Bartlett's Buildings, Holborn; Messrs. WILLIAMSON and HILL, 13, Sherborne-lane, King William street, London; Mr. JOHN HENRY LAW, of the Cathedral Gates, Manchester; Mr. J. M. GREEN, Queen-street, Chelsea, London; at the place of sale; at the principal inns in Bagillt, Greenfield, Holywell, Flint, and Rhyl; and of Mr. JOHN CHURTON, the Auctioneer, at his office at Chester.

Dated this 10th day of January, 1876.

FURZE HILL TIN MINING COMPANY (LIMITED). IN LIQUIDATION.

PRELIMINARY ANNOUNCEMENT.

SALE OF LEASE, MINING MACHINERY, AND PLANT of the FURZE HILL TIN MINE (LIMITED), Horrabridge, Devon, on Tuesday, the 1st day of February, 1876, comprising FIVE WATER-WHEELS; FIVE STAMPS AXLE, with 25 heads; ONE PATENT PNEUMATIC STAMP; TWO DRESSING MACHINES; about 40 tons pitwork, 14 in.; 8 tons rod; the dressing floors, and all the appliances of a mine in full work.

To be sold in One Lot as a going concern. Particulars will appear next week, and further information can be obtained of Captain DODGE, the Agent on the Mine; or Mr. R. GLAVILLE, Auctioneer, Horrabridge; Mr. THOMAS HOBBS, Tavistock, Liquidator; Messrs. LUXTON and SON, Solicitors, Tavistock.

TIN AND COPPER MINE, MACHINERY, PLANT, &c., FOR SALE, BY PRIVATE BARGAIN.

THE SUBSCRIBER IS PREPARED TO RECEIVE OFFERS for the PURCHASE, in One Lot, of the LEASES, PLANT, MACHINERY, BUILDINGS, STOCK IN TRADE, and others of the

EAST DARTMOOR TIN AND COPPER MINING COMPANY (LIMITED), ASHBURTON, DEVONSHIRE (commonly known as the Druid Mine), with immediate entry.

The machinery consists of a 56-in. cylinder PUMPING ENGINE, in first class order; THREE BOILERS, of 10 tons each; 155 fms. 13-in. pitwork, water-wheel, grinder, balance, capstan and chain, wire ropes, rails, windlass, rods, plates, &c.

The leases are held on favourable terms. A detailed inventory, with particulars of the leases, and all other necessary information will be supplied, on application, by

J. THOMSON DUNCAN, Liquidator. 146, Buchanan-street, Glasgow, January, 1876.

WELSH LEAD MINES.

FOR SALE, an EXTENSIVE LEAD SETT. situated in the best district, and near to VAN and EAST VAN MINES. The property contains a large productive lode, which has been very considerably opened out, and from which a good deal of ore has been sold. The requisite buildings and machinery are already erected.

For full particulars, apply by letter to "Cambria," Post Office, Llanidloes.

TO CAPITALISTS, SLATE MERCHANTS, AND OTHERS.

FOR SALE, in consequence of the ill-health of the Proprietor, ONE OF THE MOST PROMISING QUARRIES IN THE FESTINIOG DISTRICT. The quarry is already producing slates of the finest quality, and capital only is required to lay down the necessary machinery to make it a most valuable and profitable undertaking.

Apply to "Quarry," care of Mr. O. P. Williams, Bank Place, Port Madoc.

TO CAPITALISTS OR PROMOTERS DESIRING TO MAKE MONEY.

TO BE SOLD, a COLLIERY ROYALTY IN NORTH WALES, close to rail or shipping port; several shafts partially sunk; coal fully proved of FOUR SEAMS of good HOUSE and STEAM COALS, in an area of upwards of 400 acres of surface. It adjoins the West Mostyn Coal Field, just successfully launched, where under same (including Cannel) have been proved in addition to the above, so that eminent engineers state that the available coal in this royalty may be 50 feet thick.

Present holder will arrange to sell the entire to an individual or company for what it has cost him, dividing all profit made above, which, even in a normal state of the coal trade, must be large. Certain and safe surveys by eminent Staffordshire and Welsh engineers have already been made.

Address, "Nil Desperandum," care of Mr. Watson, 15, Fenwick-street, Liverpool.

MINERALS.

COAL FOR SALE, AND LEASE, BY PRIVATE TREATY. In close proximity to the town of NOTTINGHAM, from which a large READY MONEY TRADE may be expected. Principals or their authorised agents only need apply.

Apply, by letter only in the first instance, to Mr. G. H. WRIGHT, Mining Engineer, 22, Low Pavement, Nottingham.

SULPHATE OF BARYTES FOR SALE. Fine powdered, beautifully white; also in the Rock or Crude State, free from Lime and Metallic Oxide.

Samples on application to—

RUTHWAITS BARYTES MINING COMPANY, Nov. 17, 1875. WHITEHAVEN.

FOR SALE:— ONE 80 ft. OVERSHOT WATER WHEEL, 2 ft. 6 in. breast, iron rings, centre piece, shaft, wooden arms, buckets, backing.

ONE 12 ft. by 2 ft. 6 in. ditto ditto

ONE 12 head SET OF STAMPS, complete.

ONE LARGE PUMP CRANK, with four pin holes.

ONE 13 ft. IRON BOB.

EIGHT LARGE GEAR WHEELS.

ONE ONE CRUSHER, complete.

A lot of PUMP RODS, JOINTS, TRAM WAGONS, PUMPS, &c., &c.

The whole of the above has been little used; is in good condition; will be sold cheap, together or separate.

PORTABLE ENGINES, PUMPS, SAW TABLES, always on sale or hire.

Apply to—

POLYBLANK AND CO., ENGINEERS AND BOILER MAKERS, NEWTON ABBOT AND DARTMOUTH.

SINKING, WINDING COAL, &c.

FOR SALE, a 14-horse power PORTABLE STEAM ENGINE, with two cylinders, link motion reversing gear, drum 5 ft. diameter, with gearing to wind and pump, ready for delivery. Also, a 35-horse power PORTABLE ENGINE, a 9 horse and an 18 horse power VERTICAL, all with link motion reversing gear—suitable for mining operations.

BARROWS AND STUART ENGINEERS, BARBURY.

CONDENSING AND NON-CONDENSING HORIZONTAL STEAM ENGINES, of the highest class, at low prices. PUMPING AND WINDING ENGINES. First-class references. ENGINEERS' TOOLS of all kinds, unrivalled for arrangements and general usefulness, at low prices. Inspection invited.

POLLOCK AND MACNAB,

BRITANNIA IRONWORKS, HYDE, NEAR MANCHESTER.

MESSRS. TREDINNICK ARE DEALERS IN CONSOLS and all other British Funds, Home, India, and Colonial Stocks and Bonds, Railway Shares, Stocks, and Debentures, Board of Works, Metropolitan City, with other sound Securities, and Miscellaneous. British and Foreign sound dividend mines, paying 20 to 30 and 40 per cent. on capital. South Canadian pays no less than 40 per cent. Finance, all marketable properties; Coupons and Dividends collected. Several investments are now open to pay 10 to 12½ per cent. interest.

One or two promoters required to purchase a mine of unquestionable merits (£200 to £500), a rare opportunity.

43, Bishopsgate-street, London, E.C.

ONE MILLION STERLING Has been paid as COMPENSATION FOR DEATH AND INJURIES Caused by

ACCIDENTS OF ALL KINDS,

By the

RAILWAY PASSENGERS' ASSURANCE COMPANY. HON. A. KINNAIRD, M.P., Chairman.

PAID-UP CAPITAL AND RESERVE FUND £180,000.

ANNUAL INCOME, £200,000.

Bonus allowed to Insurers of Five Years' standing.

Apply to the Clerks at the Railway Stations, the Local Agents, or— 64, CORNHILL, and 10, REGENT STREET, LONDON.

WILLIAM J. VIAN, Secretary.

In the Court of the Vice-Warden of the Stannaries, Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH ROSEWARNE MINING COMPANY.—By an Order made by His Honor, the Vice-Warden of the Stannaries, in the said Matter, dated the 6th day of January last, on the Petition of William Harvey, Henry Whitford, William West, William John Rawlings, William Husband, Francis Harvey, and Nicholas James West (carrying on business at Hayle, within the said Stannaries, as General Merchants, under the style or firm of "Harvey and Company"), claiming to be Creditors of the said mining company, IT WAS ORDERED that the said NORTH ROSEWARNE MINING COMPANY should be WOUND-UP by the Court under the provision of the Companies Act, 1862.

Dated Truro, 7th January, 1876. HODGE, HOCKIN, AND MARRACK, Truro Solicitors for the said Petitioners.

In the Court of the Vice-Warden of the Stannaries, Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH ROSEWARNE MINING COMPANY.—The Vice-Warden has, by an Order made in the above Matter, bearing date the 6th day of January instant, APPOINTED JOHN HENRY HAMLEY, of Truro, within the said Stannaries, an Officer of the said Court, to be absolutely the OFFICIAL LIQUIDATOR of the above named company. FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, 7th January, 1876.

In the Court of the Vice-Warden of the Stannaries, Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH ROSEWARNE MINING COMPANY.—Notice is hereby given, that ALL CREDITORS of the ABOVE-NAMED COMPANY are required, on or before the 32nd day of January instant, TO SEND IN THEIR NAMES AND ADDRESSES, and the AMOUNTS AND PARTICULARS of THEIR SEVERAL CLAIMS, to JOHN HENRY HAMLEY, the Official Liquidator of the said company, at the Stannaries Court Office, in Truro, within the said Stannaries. FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, 7th January, 1876.

In the Court of the Vice-Warden of the Stannaries, Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH WHEAL CROFTY MINING COMPANY.—TO BE SOLD, under the direction of the Registrar of this Court, on Monday, the 24th day of January instant, at Eleven o'clock in the forenoon, at the North Wheal Crofty Mine, in the parish of Illogan, within the said Stannaries, in such Lots as will meet the convenience of purchasers, and subject to such conditions as shall be then and there produced, the undermentioned

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS Belonging to the said company, at and upon the said Mine, including, with other effects:

ONE 80 in. cylinder PUMPING ENGINE, 9 ft. stroke, with FIVE 10 ton BOILERS; balance bob, with connection rod, complete.

ONE 24 in. WINDING ENGINE, with fly wheel, ONE 8 ton BOILER, and large winding cage; several wood sheds; large quantity of wood flooring; wood frames; launders; buggies; reverberatory ovens; also the account house furniture, including miners' dial, theodolite, and quadrant, complete; large dining table in three parts; side board; blocks, office stools, chairs, tables, and desk; iron safe, &c., &c.

For inspection of the above, apply to the Bailiff in charge at the Mine; and for further particulars to Mr. JOHN HENRY HAMLEY, the Official Liquidator of the said company, at the Stannaries Court Office, Truro.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro. (Agents for Tufnell Southgate, 7, King's Bench Walk, London, Solicitor for the said Official Liquidator.)

Dated Stannaries Court Office, Truro, this 13th day of January, 1876.

FLOY COLLIERY.

TO BE SOLD, BY PUBLIC AUCTION, by Order of the Mortgagees, by Mr. THOMAS HEND, at the Steepy Arms Hotel, Llanelli, in the county of Carmarthen, in One Lot, on Thursday, January 27th, 1876, at Three o'clock in the afternoon, ALL that LEASEHOLD PROPERTY known by the name of

THE FLOY COLLIERY,

Consisting of a SLANT, with air shafts, underground openings, fitted with pumping and winding ENGINES, gearing, and necessary machinery, estimated to be capable of yielding from 100 to 300 tons of coal per day. Together with certain Branch Railways connecting the colliery with the existing lines in the Gwendraeth Valley. The distance from the colliery to the shipping place and to the Great Western Railway at Burry Port is about eight miles. The coal produced is that known as anthracite, and of excellent quality.

The above property is held under three leases at sleeping rents, the maximum of the aggregate of which amounts to £480 per annum. The royalty on coal and culm is 8d. per ton, 4d. per ton on fire-clay as to a part, and 6d. per ton as to the other part, and 6d. per ton on the ironstone comprised in two of the said leases.

The whole of the above property is situate in the hamlet of Glyn, in the parish of Llanelli, in the county of Carmarthen.

Particulars and conditions of sale may be obtained gratis of the Auctioneer, Hall-street, Llanelli; of WILLIAM ROSSER, Esq., Mining Engineer, Greenfield House, Llanelli; of Messrs. SPEERLEY and Co., Solicitors, 1, New Inn, Strand, London, W.C.; of Messrs. SMITH and PAUL, Solicitors, Truro, Cornwall; and of ROBERT JOHNSON, Esq., Solicitor, Hall-street, Llanelli.

SHARES IN A CELEBRATED MINING PROPERTY IN CHILI, YIELDING LARGE PROFITS, FOR SALE.

TO BE SOLD, BY AUCTION, at the Mart Tokenhouse-yard, in the City of London, on Tuesday, the 23rd day of May, 1876, at Two o'clock precisely, by Messrs. DRIVER, in One or more Lots, THREE SHARES (in Chili designated Barras) in the CARRIZALILLO MINING COMPANY. The company is divided into 24 shares only.

The CARRIZALILLO COMPANY own the celebrated DESCUBRIDORA MINE, and the three adjoining sets of SAN JUAN, CANCHAS, and SAN FRANCISCO MINE, which are all worked under one administration, and are situate about thirty-three miles from the Port of Pan de Azucar, from whence there is a good road.

The DESCUBRIDORA MINE has been working since 1859, and has yielded large profits. There are two steam-engines at work, one of 20-horse power and one of 8-horse power, for drawing, and there is also a newly-erected powerful engine, with Blake's crusher attached; by the use of the latter the company is enabled to dress and return the large accumulation of low-produce ore, which will now give a considerable profit. The mine is in thorough working order, and well stocked with materials, rails, jiggers, cranes, &c., &c.

The adjoining sets of SAN JUAN, CANCHAS, and SAN FRANCISCO were acquired for the purpose of securing the ground around the Descubridora Mine, and they have since been worked on a limited scale. There is also a shop, which supplies the workpeople, and also horses, carts, and mules.

Also the VEGA WASHING AND JIGGING ESTABLISHMENT, with yards, houses, shop, and stores, about nine miles from Descubridora (a tramroad is being laid down from the mine, which will greatly lessen the costs of carriage to the Vega). There are also dwelling-houses, bake-house, yards, store-rooms, ore-floors, and mole at Pan de Azucar, with convenient launches for use in loading ships with the ore; and there is also belonging to the company a quincache establishment, a watering place, situate about eleven miles from Pan de Azucar, on the road to Descubridora, with dwelling house, shop, store, mule yard, water carts, mules, and harness; and in Chancal Port a dwelling house of eight rooms, and spacious balcony and store below, with good counting house.

The company also have at Chancal other houses and sites, and also a complete condensing apparatus, with four boilers, &c.

Two-thirds of Descubridora, San Juan, Canchas, and San Francisco, with some other property of comparatively small value, were sold in 1872 for the aggregate sum of £80,000, and since then profits have been divided much more than sufficient to repay the purchase-money, and there is every prospect of Descubridora continuing to give large profits for a considerable time.

Printed conditions of sale will be shortly ready, and further particulars can be obtained in Chili from ROBERT PERELES, Esq., Chancal, Chili; and in England from Messrs. DRIVER, the Auctioneers, Whitehall, London; or of

S. T. G. DOWNING, Solicitor, Redruth, Cornwall.

THE HENDON SPELTER WORKS.

TO CAPITALISTS, PROMOTERS OF PUBLIC COMPANIES, & OTHERS.

FOR SALE, in consequence of the Death of the late Senior Partner, John Candler, M.P., the SPELTER WORKS, situate at Hendon, in the borough of Sunderland, in the county of Durham, carried on under the style of "THE HENDON SPELTER COMPANY."

The works are situated within one mile of the well known docks of the port of Sunderland, and adjoining the Hartlepool Branch of the North Eastern Railway, with which they are connected by high and low level sidings, and thereby placed in communication with all parts of the United Kingdom. Their position, within easy distance of both the ports of Newcastle and Sunderland, is very advantageous for the cheap importation of raw material, as also the forwarding of the manufactured article either by land or sea.

The ground on which the works are built can be either bought out or bought on a yearly perpetual ground rent, and any quantity under 20 acres can be included in the sale.

Being situated in the midst of the Durham Coal Field fuel of the best description can be obtained at a cost below almost any other part of the United Kingdom.

The works contain 24 zinc furnaces, capable of producing 70 tons of metal a week, as also calciners, pottofts, machinery, blacksmiths' and joiners' shops, &c., of sufficient capacity for a much larger number. The works can, therefore, be doubled at a comparatively small cost.

The quality of the metal made at these works is well known, and it, therefore commands a ready sale at the highest prices.

Attached to the high level sidings are large depôts for coal, ore, &c.

The goodwill, work, of course, goes with the works, and they will be sold subject to all stock being taken at a fair market value.

The purchaser can also have the option of buying the CALCINING WORKS and VALUABLE MINES IN SPAIN, thus allowing of the economical and regular supply of the raw material, and saving the mineowners' and merchants' profits.

As the ore from the South of Spain generally comes as ballast for ships laden with asphalt, it has been brought for this company at an average cost of 7s. per ton, sometimes as low as 4s. 6d.

Further particulars can be had on application to the company.

THE TAVISTOCK IRONWORKS, ENGINEWORKS

FOUNDRY, AND HAMMER MILLS,

TAVISTOCK, DEVON.

NICHOLLS MATHEWS, AND CO.

ENGINEERS, BRASS AND IRON FOUNDERS,

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MAKERS OF

CORNISH PUMPING, WINDING, AND STAMPING ENGINES; STEAM CAPSTANS AND CRUSHERS; WATER-WHEELS; PUMP-WORK; SHOVELS, AND HAMMERED IRON FORGINGS OF EVERY DESCRIPTION.

Also of SPUR, MORTICE, MITRE, BEVEL, and other WHEELS, of any dia meter up to 12 feet, made by Scott's Patent Moulding Machine, without the aid of patterns, and with an accuracy unattainable by any other means.

MACHINERY for FOREIGN MINES carefully prepared. SECONDHAND MINING MACHINERY, in good condition, always on safety at moderate prices.

ENGLISH TIN, AND HOW TO COMPETE SUCCESSFULLY WITH AUSTRALIA.

USE DYNAMITE.

Invaluable for BLASTING the HARDEST and WETTEST ROCK; SAFER to USE; and EFFECTS a GREAT SAVING of time and money.

Pamphlets free by post. An experienced man sent underground to give instructions when necessary, free of charge.

Apply.—STEPHEN WILLIAMS, CAMBORN.

THE PATENT SELF-ACTING MINERAL DRESSING MACHINE COMPANY (LIMITED).

T. CURRIE GREGORY, C.E., F.G.S.

OFFICES,—150, ST. VINCENT STREET, GLASGOW.

IMPORTANT NOTICE TO MINE PROPRIETORS.

This company grant licenses, under their patents, for the use, singly or in combination, of the most approved machinery for dressing ores, comprising Stamps, Jiggers, Classifiers, and Buddles.

MR. GEORGE GREEN, Mechanical Engineer to the above Company, SUPPLIES MACHINES under the above Company's Patents for DRESSING all METALLIC ORES. Dressing-floors having these Machines possess the following advantages:—

- 1.—They are cheaper than any other kind in first outlay.
- 2.—From 60 to 70 per cent. of the labour is saved.
- 3.—Only about one-fourth of the space usually occupied by dressing-floors is required.
- 4.—The ore is made clean at one operation, and 5 per cent. of ores otherwise lost is saved.

Drawings, specification, and estimates will be forwarded on application to—

GEORGE GREEN, M.E., ABERYSTWYTH, SOUTH WALES.

EXTRACTS FROM TESTIMONIALS RECEIVED:—

Mr. C. E. BAINBRIDGE, of the London Company's Mines, Middleton-in-Teesdale, by Darlington, writing on the 27th September, 1875, says:—"After a full season's experience of the very complete Dressing Machine erected by you at our Colberry Mines, we are fully satisfied with our decision to adopt your patents in preference to all others. The machinery does its work as well as we can desire, and better than we anticipated. We are now getting through 70 tons of ore-stuff per day, of rich quality. Without your machinery we should have been at a standstill for the last few weeks, and we could not get hands to supply our wants elsewhere. It saves fully one-half of the old wages, and vastly more on the wages we now give, and the saving in ore is not much short of 10 per cent. You can quote from this letter as you think proper."

Mr. COULTAS DODSWORTH, of Haydon Bridge, writes, on the 15th January, 1874:—"I have just returned from the Stoneycroft and Greyside Mines, where I have seen your 'Patent Ore Dressing Machinery' at work, with which I must say, I was highly pleased. It is decidedly the best machinery I have ever seen for the purpose, the results being as near perfection as possible, and I am quite sure its use in this case will be a very great saving to the company. No large mining establishment should be without your machinery, especially when labour is difficult to procure—a mere fraction of the hands being only required as against the old system, and the work altogether much better done, and a great saving of ore effected. I have heard it said that your machinery is better adapted for poor than for rich ores, but from what I have seen to-day I am quite confident it will do for any kind of ore. I beg not only to congratulate, but also to compliment, you on the great success of your 'Patent Ore Dressing Machinery.' You may use this letter as you think proper."

Mr. MONTAGUE BEALE, Managing Director of the Cagliari Mining Company (Limited), says, on May 15th, 1875:—"I have much pleasure in speaking of the great efficiency of your 'Patent Dressing Machinery,' as erected by you at our mines at Rosas, in the Island of Sardinia. You will remember it has always been considered impossible to dress, or rather separate, the minerals our ores contain by machinery, but our captain assures me he gets a constant return of 75 per cent. of lead with the greatest ease, and I know by the returns we are realising the best market price. I consider this company is much indebted to you for the success you have achieved at so small cost. It may interest you to know, from my experience in several of the British possessions, including the whole of the Australian colonies, that my opinion is I have never seen any dressing machinery that can efficiently, and at so small a cost, dress, and separate metallic ores, however close the mechanical mixture may be, as yours. You can use this letter in any way you like."

The most satisfactory testimonials also have been received from the GREENSIDE MINE COMPANY, Westmoreland; the TALAROCH MINING COMPANY, North Wales, and others. Copies of these may be obtained from Mr. GREEN.

JOHN AND EDWIN WRIGHT,

PATENTERS.

(ESTABLISHED 1770.)

MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED

PATENT FLAT AND ROUND WIRE ROPES

from the very best quality of charcoal iron and steel wire.

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SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE

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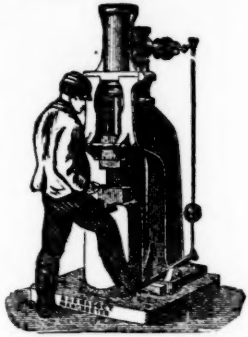
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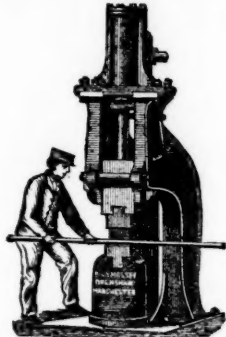
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS Awarded:—Paris, 1867; Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873; Scientific Industry Society, 1875. Leeds, 1875.

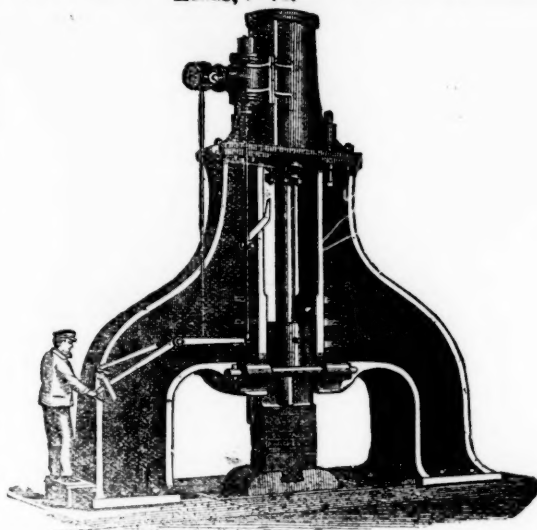
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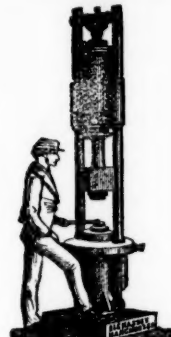
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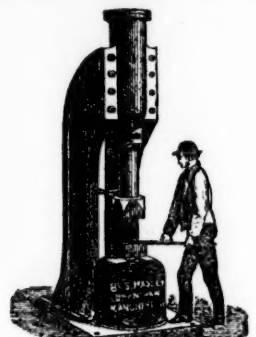
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Steam Hammer for Heavy Forging.



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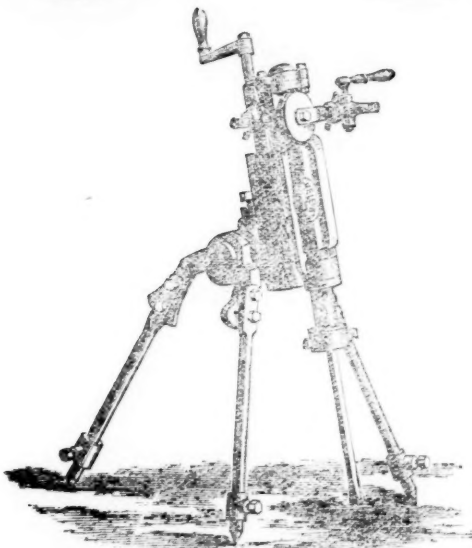
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It is the CHEAPEST and MOST PROFITABLE MACHINE for SINKING, MINING, and QUARRYING. It is preferred and adopted (after trials) by owners and managers of mines both in England and abroad.

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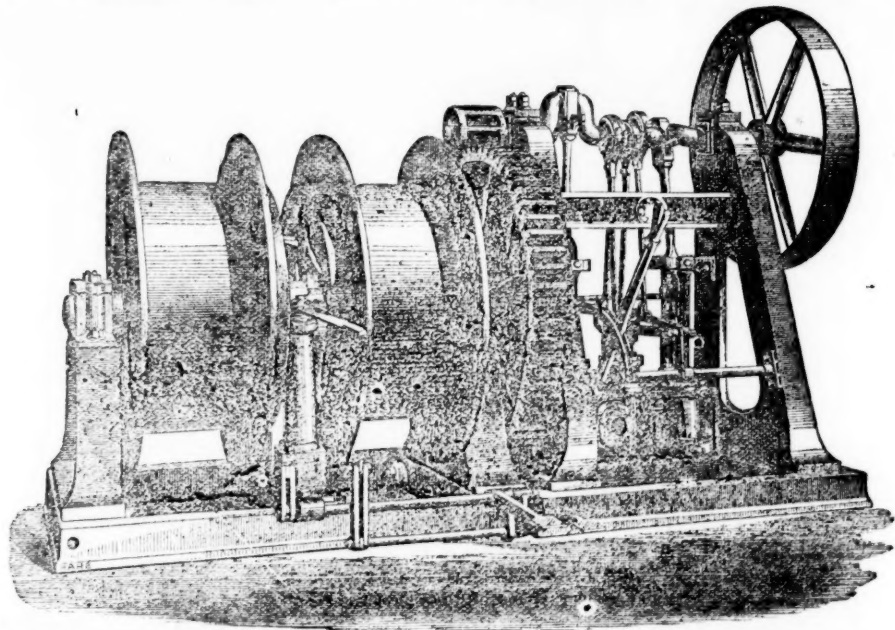
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INGOTS, Nos. I or II, suitable for Pumps, Pinions, Ornamental Castings, &c. £130 per ton
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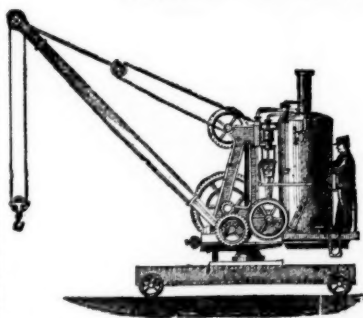


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Takes less room, and can be supplied for less money, than any other Engine of same power.

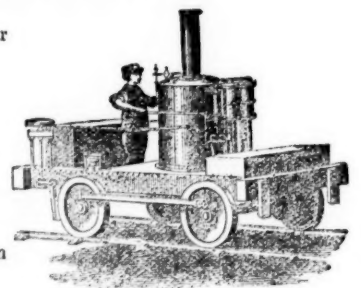
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STEAM CRANES,
Portable or Fixed, for Railways, Wharves, &c., for unloading
COAL, BALLAST, &c.,
To hoist 15 cwt. to 30 tons.

LOCOMOTIVES,
6 to 27-horse power. For Steep Inclines and Sharp Curves.
Gauge from 2 feet upwards.
Geared to draw very heavy weights in proportion to their power, and SPECIALLY
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D., C., and S. beg to call special attention to the advantages to be derived by adopting their EXTRA STRONG IMPROVED STEEL ROPES, for lifting heavy loads in deep mines, also in hauling from long distances; a considerable reduction is effected in weight, friction materially reduced, and an extra amount of work got out of the rope—a rope 8 lbs. per fathom being equal in strength to an iron rope 12 lbs. per fathom, or an ordinary steel rope 12 lbs. per fathom.

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Is the MOST ECONOMICAL and POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

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No VALVE—BLOW obtained by the movement of the PISTON.
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Coal-Getting by Patent Hand-Worked Machinery, WITHOUT THE USE OF GUNPOWDER.

- No. 1 MACHINE - THE HAND COAL-CUTTER, for under-cutting.
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The use of these Machines, while doing away with the greatest source of danger, economises at least Fifty per cent. of the labour required in Getting Coal.

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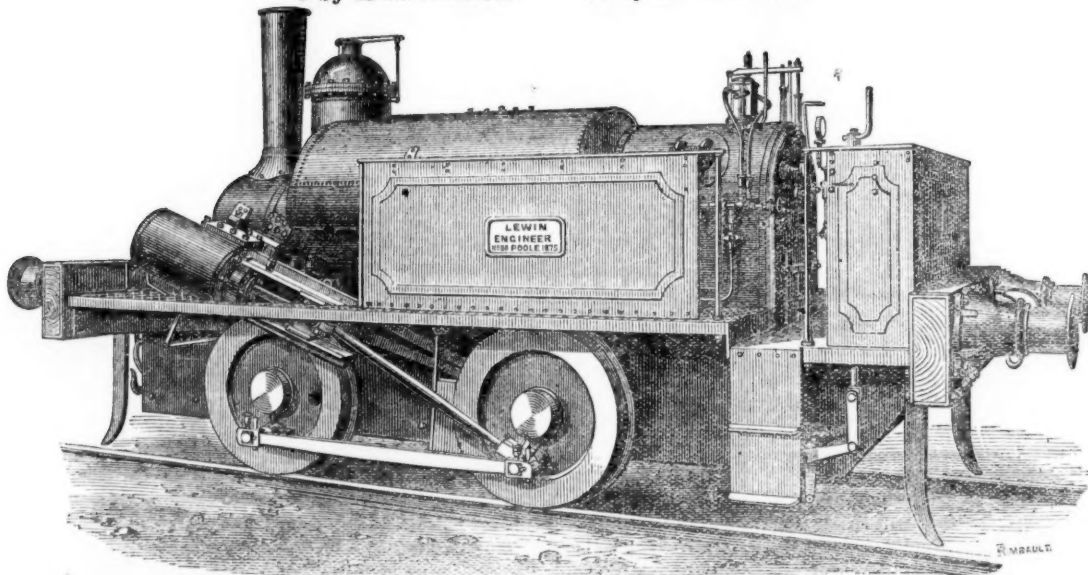
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Speciality in cheap colliery and contractors' Locomotives, and very small Locomotives for replacing Horses.

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EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE
THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICK-
FORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as
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BENNETTS' SAFETY FUSE WORKS,
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BLASTING FUSE FOR MINING AND ENGINEERING
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Suitable for wet or dry ground, and effective in Tropical or Polar Climates.

W. BENNETTS, having had many years experience as chief engineer with
Messrs. Bickford, Smith, and Co., is now enabled to offer Fuse of every variety of
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Price Lists and Sample Cards may be had on application at the above address.
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RAILWAY CARRIAGE COMPANY (LIMITED).—

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OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY
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Passenger carriages and wagons built, either for cash or for payment,
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RAILWAY WAGONS FOR HIRE.

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AGENTS WANTED in all Mining Districts for the LANDAU MINERS' LIFE
PROTECTING LAMP. For particulars, apply to Messrs. LANDAU, Coal
Merchants, and Manufacturers of several important Inventions, 220, HIGH
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The objects attained by the Patent Lamp are:—

- 1.—It is a perfect safeguard against explosion.
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- 4.—It is impossible for the miner to tamper with it with impunity.
- 5.—All the above improvements can be adapted by Messrs. Landau to any other lamps at present in use.

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COAL MERCHANTS AND MANUFACTURERS OF SEVERAL IMPORTANT
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THE STANDARD LUBRICATING OILS COMPANY (LIMITED),

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The SPECIALITY of the COMPANY'S OILS consists in their CHEAPNESS
and FREEDOM from GLUTINATION.

AGENTS WANTED.

TO RAILWAY CONTRACTORS, MINERS, AND QUARRYMEN.
COTTON POWDER.

THE SAFEST, STRONGEST, AND CHEAPEST BLASTING
POWDER KNOWN to the PUBLIC or to SCIENCE.

NO SMOKE NOR NOXIOUS FUMES.

WILL NOT EXPLODE WITHOUT A DETONATOR IS APPLIED.

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GLOBE STEAM BOILER POWDER

Effects a saving of over 15 per cent. in the cost of steam.

Increases the durability of the boilers.

Avoids the continual annoyances caused by scaling.

Produces complete circulation of the water in the boiler.

One pound per 4 horse power dissolved in the feed-water daily.

Price 20s. per cwt., delivered in casks of 10 cwt. each.

No. 75, MARK LANE, LONDON.

SEND FOR LISTS, SHOWING EXTRA LARGE DISCOUNTS
FOR CASH.

HOWARD RYLAND AND CO.,

MANUFACTURERS,

105 AND 106, NEWHALL STREET, BIRMINGHAM,

CLOTH AND MANILLA CARTRIDGE

DIRECTION LABELS.

SELF INKING ENDORSING STAMPS.

DOOR AND WINDOW PLATES of Brass, Zinc, and of Plate Glass.

Letter Copying Presses, Everletting Presses, Embossing Presses, Stamps for
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Printing, Letter Cutting, Die Sinking, Engraving, Wood Engraving, Stereo-
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Birmingham Goods of every description supplied at low prices for cash only.

Endorsing Inks supplied, Old Stamps repaired, Door and Window Plates re-
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per dozen letters; usual price, 7s. 6d.; and ENGRAVING 2s. 6d. per dozen
letters.

FLEXIBLE PRINTING STAMPS at less than half the List Price. Key and
Umbrella Labels at 6d. each, engraved.

DOOR AND WINDOW PLATES, at very low prices.

AGENTS WANTED.

IRON AND COAL COMPANIES.

IRON AND COAL COMPANIES.

IRON AND COAL COMPANIES.				
Shares.	Company.	Prind.	Price.	
£100	Abbot, John, and Co. [L.]	£75 0 0	4½	pm.
15	Albion Steel and Wire Co. [L.]	12 10 0	13½	1½
5	Altamli Colliery Co. [L.]	5 0 0	par	pm.
100	Asbury Co. [L.]	90 0 0	33	30 dis. xd.
5	Bagnall, John, and Sons [L.]	10 0 0	6½	6
60	Balao Iron Co. [L.]	10 0 0	1½	1½ pm.
10	Benhar Coal Co. [L.]	10 0 0	6	4
10	Bilston & Crump Midway Co. [L.]	10 0 0	6	4
4	Blanc Cwmnach Coal Co. [L.]	4 0 0	½ dis.	par.
50	Blancavon Iron and Steel Co. [L.]	50 0 0	—	—
100	Bolekov, Vaughan, and Co. [L.]	25 0 0	15	16
60	Bowling Iron Co. [L.]	60 0 0	—	pm.
60	Britannia Ironworks [L.]	25 0 0	—	—
60	Brown, Bailey, and Dixon [L.]	40 0 0	25	34
100	Brown, John, and Co. [L.]	70 0 0	6	7
5	Cakemore Colliery Co. [L.]	5 0 0	par	pm.
100	Canal Coal and Co. [L.]	80 0 0	5½	5½ dis.
20	Cannock and Stratford Coal [L.]	2 0 0	—	—
10	Cardiff & Swansea Sea Coal Co. [L.]	2 0 0	—	—
10	Cardigan Steel and Wire Co. [L.]	7 10 0	7½	7
10	Central Swedish Iron and Steel [L.]	10 0 0	1	3
5	Chapel House Colliery	5 0 0	13½	1½ dis.
50	Charlton Iron Co. [L.]	40 0 0	32	31
50	Chatterley Iron Co. [L.]	40 0 0	17	15
10	Chillingworth Iron Co. [L.]	10 0 0	5½	4½
1	Clee Hill Colliery Co. [L.]	1 0 0	—	—
10	Consett Iron Co. [L.]	7 10 0	13	14
1	Consett Spanish Iron Co. [L.]	1 0 0	—	pm.
50	Cooke, William, and Co. [L.]	30 0 0	23	23
20	Darlington Iron Co. [L.]	10 0 0	6	6
5	Davy Brothers [L.]	22 10 0	11½	11½
5	Diamond Fuel Co. [L.]	4 10 0	¾	1½
32	Ebbw Vale Co. [L.]	29 0 0	10	15
10	General Mining Ass. [L.] (£1 returned)	9 0 0	4	6
2	Great Western Coal Co. [L.]	17 0 0	7	6
2	Gwynnwillim Colliery Co. [L.]	2 0 0	—	dis.
15	Hopkins, Glikes, and Co. [L.]	10 0 0	6	5½
10	Ifton Rhyn Colliery Co. [L.]	10 0 0	9½	9
5	Knowles, Andrew, and Sons [L.]	17 0 0	7	7½
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0	—	—
5	Leedswood Woodside Coal Co. [L.]	5 0 0	—	—
5	Lyfni, Ogmors, & Tondur Co. [L.]	50 0 0	27	26
10	Lydney and Wigpool Iron Ore [L.]	7 5 0	8½	7½
10	Marbella Iron Ore Co. [L.]	10 0 0	6½	6
5	Mersey Steel and Iron Co. [L.]	5 0 0	—	—
10	Midland Iron Co. [L.]	5 0 0	3	4
5	Mold Argoid Colliery Co. [L.]	5 0 0	—	pm.
10	Monkland Iron and Coal Co. [L.]	10 0 0	7½	7½
4	Mwyndy Iron Ore [L.]	3 10 0	2	1½
100	Nant-y-Glo and Blaia (8 p.c. pref.)	100 0 0	33	38
1	Nerbudda Coal and Iron	0 8 0	par	½ pm.
20	New Sharncliffe Coal Co. [L. pref.]	20 0 0	16	14
10	Newport Abercraf Coal Co. [L.]	8 0 0	—	—
10	Northmu, Coal, Iron & Wagon [L.]	8 0 0	—	—
10	Northfield Iron Co. [L.]	8 0 0	3½	2½
1	Norton Green Coal Co. [L.]	1 0 0	—	—
35	Palmer's Shipbuilding and Iron [L.]	25 0 0	15½	15
100	Parkgate Iron Co. [L.]	85 0 0	10	10½
20	Patent Nut and Bolt Co. [L.]	14 0 0	7½	7½
20	Patent Shaft and Axletree [L.]	10 0 0	—	—
20	Pelsall Coal and Iron [L.]	15 0 0	6	4
5	Pennine Breckness Coal Co. [L.]	5 0 0	—	dis.
50	Rhymney Iron Co. [L.]	60 0 0	26	28
100	Samuel Fox and Co. [L.]	90 0 0	34	35
100	Sandwell Park Colliery Co. [L.]	100 0 0	—	pm.
50	ditto New	19 0 0	—	—
50	Rhotta Iron Co. [L.]	50 0 0	14	15
100	Sheepbridge Iron and Coal [L.]	55 0 0	21	21½
5	Silkestone & Dodworth Cl. & Iron [L.]	22 0 0	—	—
5	Silkestone Fall Colliery Co. [L.]	5 0 0	—	—
20	Skerne Ironworks [L.]	20 0 0	—	—
50	Somorrostro Iron Co. [L.]	50 0 0	—	—
20	South Wales Coal and Iron [L.]	17 0 0	—	—
100	Staveley Iron and Coal Co. [L.]	90 0 0	44	41
10	ditto ditto New	10 0 0	8	8½
20	South Cleveland Ironworks [L.]	20 0 0	—	—
10	Swansea Valley Steam Coll. Co. [L.]	8 0 0	—	—
100	Thames Iron Company	100 0 0	—	—
50	Tredegar Iron and Coal Co. [L.]	12 0 0	¾	¾
25	ditto B. shares	25 0 0	3	2
20	Ulverston Mining Co. [L.]	10 0 0	1½	1
1	United Bituminous Collieries [L.]	1 0 0	—	—
10	Vancouver Coal [L.]	8 0 0	1	1½
100	Vickers, Sons, and Co. [L.]	100 0 0	—	—
50	Welsh Ironworks Co. [L.]	50 0 0	—	—
25	W. Cumberland L. & Steel [L.]	20 0 0	8	6
10	West Moors Coal Co. [L.] (12 p.c. pref.)	5 0 0	—	—
5	West Swansea Colliery Co. [L.]	5 0 0	—	—
10	Whitehaven Iron Co. [L.]	10 0 0	—	—
100	Wigan and Whiston Coal Co. [L.]	70 0 0	—	—
100	Wigan Coal and Iron Co. [L.]	75 0 0	—	—

TELEGRAPH COMPANIES.

WAGON COMPANIES.				
10 Birmingham Wagon Co. [L.].....	10 0 0.....	21	21½	
20 British Wagon Co. [L.].....	10 0 0.....	4	4½	pm.
30 Sheffield Wagon Co. [L.].....	15 0 0.....	2½		pm
10 Yorkshire Wagon Co. [L.].....	10 0 0.....	8	4	pm.
TELEGRAPH COMPANIES.				
"Bt." Anglo-American	100 0 0.....	64½	65½	
10 Brazilian Submarine	10 0 0.....	5½	6½	
20 Direct United States Cable	20 0 0.....	—	—	
10 Eastern	15 0 0.....	6½	6½	
10 East. Exten., Australia and China...	10 0 0.....	7	7½	
10 Great Northern.....	10 0 0.....	8½	8½	
25 Indo-European	25 0 0.....	22	23	
10 Mediterranean Extension	10 0 0.....	19½	11½	
8 Reuters	8 0 0.....	185	205	
8½k. Submarine	100 0 0.....	185	11½	
10 West India and Panama	10 0 0.....	1½	2	
20 Western and Brazilian	20 0 0.....	9½	10½	
\$1000 Western Union, 7 per cent. Mort. Bonds	\$1000.....	106	108	

MISCELLANEOUS.

MISCELLANEOUS.

Stk.	Atlantic and Great Western Leased Lines, Rental Trust	100	0 00	43	43	
25	Austral. Mort. Land and Finance [L.]	5	0 00	34	34	pm
25	Australian Agricultural	21	10 00	99	101	
10	Avoids Engine [L.]	5	0 00	1	1	dis.
Stk.	Baltimore and Ohio, 5 per cent.	100	0 00	109	109	
Stk.	Cent. of New Jersey Con. Mort.	100	0 00	99	100	
Stk.	Cent. Pacific of Calif., 1st Mort. 5 p.c.	100	0 00	94	96	
25	City of London Real Property [L.]	12	0 00	1	1	dis
25	Copper Miners of Eng. (7 p.c. p.ief.)	26	0 00	—	—	
5	Credit Foncier of England [L.]	5	0 00	134	3	
	Ditto New York	5	0 00	134	134	
5	Discount Royal Borneo	5	0 00	1	1	dis.
15	English and Foreign Credit	5	0 00	4	5	dis.
15	Finster, Porter, and Co. [L.]	10	10 00	9	10	pm
5	Gen. Phos. & Chem. Works Co. [L.]	5	0 00	—	—	
1	Glaisdale Whinstone Quarry	1	0 00	1	134	
17	Hudson's Bay Company	17	0 00	214	214	
10	Huntington Copper and Sul. Co.	9	0 00	5	7	dis.
Stk.	Illinois Central, 5 100 shares	100	0 00	87	89	
Stk.	Illinois & St. Louis Bridge, 1st Mort.	100	0 00	89	90	
Stk.	Ditto, 2nd Mort., 7 per cent.	100	0 00	55	60	
Stk.	Illinois Cent. Sinking Fund, 5 p. cent.	100	0 00	98	97	
Stk.	Ditto, 6 per cent.	100	0 00	108	110	
7 1/2	Imperial Credit [L.]	7	10 00	73	73	
	Ditto, Surplus Certificate	—	—	64	64	
St.	Lehigh Val. Con. Mort., A & B. p. cent.	100	0 00	103	104	
15	Mines and Smelters	100	0 00	11	12	
25	National Discount [L.]	5	0 00	9	9 1/2	
Stk.	N. Cent. Rail. Con. Mort., 6 per cent.	100	0 00	91 1/2	92 1/2	
5	Patent Gunpowder Company	5	0 00	5	4	dis.
Stk.	Pennsylv. Gen. Mort. 5 p. cent., 1910.	100	0 00	105 1/2	106 1/2	
Stk.	Ditto, Con. Sink. Fund, 6 p. ct., 1905	100	0 00	99	99	
5	Pennsular and Oriental Steam	50	0 00	40	42	
10	Silver Light (ord. sh.)	10	0 00	8	8 1/2	
50	Suez Canal shares	50	0 00	30	34	
12	Telegraph Construc. & Mainte. [L.]	12	0 00	26	27	
5	Ditto, Second Bonus Three per Cents	5	0 00	23 1/2	24 1/2	
10	Tharshis Sulphur and Copper Co.	10	0 00	24	24 1/2	
Stk.	Union Pacific Land Grant, 1st Mort.	100	0 00	91 1/2	93	
Stk.	Union Pacific Railway, 1st Mort.	100	0 00	92	94	

b, blende; *cl*, coal; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate;
s-l, silver-lead; *t*, tin; *z*, zinc.
 * Limited Liability Companies; † quoted on the Stock Exchange.
 ‡ have paid dividends.

b, blende; *c*, coal; *e*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate;
st, steel; *sv*, silver-lead; *t*, tin; *z*, zinc.
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